

ANNUAL REPORT

OF THE

PUBLIC HEALTH

OF THE

NEWTON ABBOT (RURAL)

NEWTON ABBOT (URBAN)

AND

DAWLISH (URBAN)

SANITARY DISTRICTS.

For 1904.

BY

H. B. MAPLETON, M.A., M.D., D.P.H.

MEDICAL OFFICER OF HEALTH.

COMPARATIVE TABLE.

PLACES. 1903.	Birth-rate.	Annual death-rate per 1,000 of population.									Deaths under one year to every 1000 births.
		Total Death-rate.	From Seven Zymotics.	Small-pox.	Measles.	Whooping Cough	Scarlatina.	Diphtheria.	Continued Fever.	Diarrhoea.	
England & Wales *	26·8	15·3	1·28	·01	·23	·27	·69	·14	·08	·46	125
Newton Abbot Rural	21·8	15·1	·90	...	·16	·58	...	...	·05	·11	121
Newton Abbot Urban	22·9	15·5	·85	...	...	·15	...	...	...	·70	114
Dawlish Urban.....	19·0	16·0	·50	...	...	·50	...	..	...	...	105

* Less 218 towns.

RAINFALL IN 1904.

In comparison with the high figures of 1903, there was a considerable drop in the succeeding year, which varied in nine stations under observation from 4·5 inches at Dawlish W, to nearly 13 at the Blackinstone and Tottiford. With the exception of these two, however, there is a slight excess as compared with the average amount of a previous series of years. The greatest fall was attained in February, while January and July were not far behind : as in 1903, April, June and November were the driest months. With a normal rainfall, water supplies have as a rule been ample, and complaints as to scarcity few. I give below statistics for stations in these districts :—

STATIONS.		Feet above sea level	January	February	March	April	May	June	July	August	September	October	November	December	Total rainfall in inches	Average.
1	Dawlish, East (Lawn)	18	4·76	6·20	2·17	1·05	2·36	1·10	5·33	2·98	1·77	2·31	1·36	2·82	31·21	...
2	Dawlish, West (Vicarage)...	60	4·30	5·64	1·80	·86	2·38	1·11	5·32	2·81	1·45	1·83	1·48	2·83	31·79	29·31
3	Hennock, Tottiford.....	718	6·38	7·01	2·79	1·34	2·45	1·04	4·61	2·35	2·10	1·99	1·97	3·83	37·86	41·56
4	Highweek, Newton Abbot	250	6·16	6·48	2·58	1·22	2·32	1·24	5·50	2·73	2·60	2·17	1·93	3·31	38·30	...
5	Ideford, Rectory	300	5·41	6·78	2·71	1·07	2·29	1·14	5·42	2·78	2·84	2·14	1·64	3·03	37·25	34·15
6	Kingskerswell, South Hill	270	5·07	6·39	2·37	·99	2·18	1·17	4·94	2·90	2·35	2·13	1·72	3·21	35·42	32·65
7	Kingsteignton, Teignbridge	27	5·82	6·74	2·83	1·11	1·87	1·06	4·94	3·04	2·49	2·02	1·64	3·05	36·61	35·40
8	Moret'nhamstead Blackinstone	1090	4·20	5·26	2·12	·95	2·01	·88	4·65	2·18	1·46	1·88	1·53	3·12	30·24	32·43
9	Trusham, Rectory	320	5·52	6·95	3·14	1·19	2·35	1·27	5·59	2·75	2·41	2·37	1·91	3·36	38·81	37·31

The averages in the last column are for 5 years at Dawlish West : 8 at Blackinstone : 9 at Kingskerswell ; 12 at Teignbridge ; 17 at Ideford and Trusham ; and 27 at Tottiford.

I am indebted for the above figures to the Revs. C. F. Benthall (West Dawlish) : O. H. Cary (Trusham) : and G. J. Ford (Ideford) : Messrs. S. Chapman, Water Engineer to the Torquay Corporation (Tottiford and Blackinstone) : R. E. Clarke, Surveyor (Dawlish East) : E. A. Foster, (Kingskerswell ; and F. H. Plumptre (Teignbridge.)

1.—NEWTON ABBOT (RURAL.)

PHYSICAL CHARACTERS.—The district presents two distinct features. The central portion is occupied by a low-lying area of irregular shape, being 8 or 9 miles by 2 or 3 in its greatest dimensions, and drained by the river Teign and its tributaries. This was formerly the site of a lake belonging to the miocene period, and the soil is composed of beds of clay, quartzose sand—the washings from the surrounding hills—and lignite, which at one point have been ascertained to attain a depth of over 500 feet. The working of this clay constitutes a special source of trade and wealth in the neighbourhood. This level area is bounded by hills of red breccia or sandstone (on the coast), greensand, shales, and limestone, and to the westward by the igneous bosses of Dartmoor, attaining in this locality an elevation of 1,560 feet at Rippon Tor, and culminating on the margin of the district in the mass of Hameldown, 1750 feet above sea level. These constitute uplands, which, with their wooded slopes, pure moor breezes, and abundance of water, are altogether faultless as far as natural endowments go. Thus the varieties of climate to be found are marked—the warm and sheltered coombes, luxuriant in foliage, which run down to the sea or the valley of the Teign, as for instance those in which lie the villages of Bishopsteignton, Coombe and Lustleigh, are at one end of the scale ; whereas at the other are Moretonhampstead, Manaton, and Ipplepen, on uplands of considerable elevation, and lower barometric pressure.

The district has an acreage of 99, 142, and a population at the census of 1901 of 18, 902 ; it includes 28 parishes, varying in density from those containing the small towns of Bovey, Chudleigh, and Moretonhampstead, to the purely rural and thinly inhabited areas of Manaton, Widecombe and Woodland. At the time of the above census there were 4,229 inhabited houses, with an average of 4·5 persons

per house ; since then, however, a number of new houses have been built, especially in the towns of Bovey, Kingsteignton, and Moreton. There has been no change in the constitution of the district during the past three years, and for the purposes of calculating the various rates given in the accompanying tables I have left the census figures of population unchanged.

VITAL STATISTICS.—The number of deaths in persons belonging to the district was 285, of which 129 were in males and 156 in females, giving an annual death rate of 15·1 per 1,000. This is 2·6 above that of 1903, which, however, was the lowest general death rate recorded, and coincides with the average for the last 10 years. Of these 285 deaths, 17 took place in the Union House in persons belonging to the district ; if these are excluded the rate is reduced to 14·2. The highest mortality was shewn in the first quarter of the year, while March (41 deaths) and January (36) were the most fatal months. 97 deaths were registered in the first quarter, 78 in the second, 52 in the third, and 58 in the fourth, giving rates per 1,000 per annum of 20·5, 16·5, 11·0 and 12·3 respectively.

CHIEF CAUSES OF FATALITY.—From 7 zymotic diseases, 17 deaths ; erysipelas, 1 ; other septic diseases, 3 ; influenza, 5 ; constitutional diseases, 60, of which 22 were due to cancer and 23 to phthisis ; diseases of the nervous system, 41 ; of the respiratory system, 39 ; of the circulatory system, 39 ; of the urinary system, 6 ; of the digestive system, 21 ; of the lymphatic system, 1 ; of the generative organs, 1 ; of parturition, 2 ; infantile debility, 6 ; premature birth, 9 ; alcoholism, 1 ; old age, 25 ; violence, 7, of which 5 were due to accident and 2 to suicide ; and indefinite, 1.

AGE INCIDENCE.—Under the age of 1 year there were 50 deaths ; between 1 and 5 years, 21 ; between 5 and 15 years, 2 ; between 15 and 25 years, 15 ; between 25 and 65 years, 78 ; and over the latter age, 119. Thus 17·5 per cent. of the deaths were under 1 year, and 41·8 over 65 years ; in 1903 the figures were 12·3 and 41·9 respectively, so that the former item is less favourable, while the latter remains practically the same.

THE INFANTILE MORTALITY or number of deaths under 1 year to 1,000 births was 121, an increase of 37 as compared with the low figure of last year and 9 above the 10 years average. The causes of infantile

Death Rates, &c., in each Parish

PARISHES.	Census 1901.		Ordinary Zymotics.							Influenza.	Phtisis.	Other Tuber- cular Diseases	Cancer	Apoplexy.	Infantile Inanition.	Violence.	Deaths in Union House belonging to Parishes.	Total Deaths.	Death Rate.
	Population.	Acreage	Small Pox	Scarlatina.	Diphtheria.	Whooping Cough	Measles.	Diarrhoea.	Continued Fever										
Abbotskerswell ...	457	1486	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	7	15.3
Bickington.....	215	1403	...	...	...	...	...	...	...	...	...	...	2	...	...	1	...	10	9.3
Bishopsteignton ...	1076	4449	...	...	...	3	...	...	1	...	1	...	2	...	2	...	2	40	14.8
Bovey Tracey	2694	7567	...	...	...	...	1	...	...	...	...	...	3	...	...	...	2	13	29.2
Broadhempston ...	445	2200	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...
Buckland	87	1493	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chudleigh	1820	6128	...	...	...	...	...	...	...	...	...	...	3	...	...	...	3	33	18.1
Cockington	265	1451	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	4	15.1
Coffi'sw'ill & D'em'be	201	1152	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	14.9
Coombe & Hacombe	358	2004	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	8.4
Dawlish (West) ...	678	3870	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	8	11.8
Denbury & Torbrian	448	3002	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	11	24.6
Hennock.....	711	3299	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	12	16.9
Ideford	254	1440	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	15.7
Ilington	886	7843	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	7	7.9
Ipplepen	789	2887	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	11.4
Kingskerswell	1027	1797	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18	17.5
Kingsteignton	1942	3975	...	...	...	2	...	2	...	...	...	...	2	...	...	...	...	39	20.1
Lustleigh	400	2978	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	10.0
Manaton	315	6122	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	31.7
Moretonhampstead	1541	7910	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	27	17.5
North Bovey.....	398	5589	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2.5
Ogwell	250	2089	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	16.0
Stoke	463	2167	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	8.6
Teigngrace	190	1496	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trusham	165	625	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Widcombe	657	10786	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	30.3
Woodland	170	1634	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	12.2
Totals.....	18902	99142	...	...	...	11	3	2	1	5	23	6	22	24	6	7	17	285	15.1

mortality were measles, 2 deaths ; whooping cough, 5 ; diarrhoea, 2 ; tubercular disease, 3 ; diseases of the nervous system, 5 ; of the respiratory system, 7 ; of the circulatory system, 2 ; of the digestive organs, 8 ; debility, 6 ; premature birth, 9 ; and indefinite, 1.

The births of 215 boys and 197 girls give an annual rate of 21·8 per 1,000 ; this is 3·6 higher than last year's lowest on record, but is still rather less than the average for the previous ten years, which was 23·1. 108 births were registered during the first quarter, 102 in the second, 87 in the third, and 115 in the fourth, giving rates per 1,000 per annum of 22·9, 21·6, 18·4 and 24·3 respectively. The natural increase of population, i.e., the excess of births over deaths, reckoning the mortality in the Union House, was 127, as against 108 in 1903 and 167 in 1902.

These figures show somewhat of a reaction from the low water mark attained in 1903 in respect to the general death rate and the infantile mortality, both of which are comparatively high. Other compensating features are, however, present ; measles and whooping cough being prevalent in various parts of the district were responsible for almost all the deaths from zymotic disease, the rate of ·90 per 1,000 being even then only a fraction above the average ; they also added considerably to the infantile mortality. No deaths were recorded from scarlatina or diphtheria, and only 1 from typhoid fever, whereas in the previous year these two latter alone caused 9 fatalities ; the district therefore suffered very little from the more serious type of zymotic disease. The birth rate, again, though low, and nearly 4 below the average, shews an appreciable advance in comparison with 1903.

Under the other chief headings, the deaths from cancer, the tubercular group, and heart disease are about normal, though all are higher than in the previous year ; while those resulting from bronchitis, &c., and violence—especially the latter—are comparatively few. The figures are tabulated on page 8 for purposes of comparison, with averages for the previous ten years ; also the statistics for five preceding years. In comparing the actual number of births and deaths with those of preceding years, it should be remembered that the population was reduced by 2,553 in 1901, when Highweek ceased to form part of the district. At the latter end of 1903 Bishopsteignton was transferred from the Chudleigh to the Teignmouth sub-registration district, and is therefore included in the Sea Border, causing some alteration in the figures of both these districts as to population.

Of the sub-registration Districts, Sea Border on the whole occupies the best position ; the zymotic rate (due to 1 death from whooping cough) and infantile mortality are the lowest, the latter being an especially favourable feature, while the general death rate is also small, being 2·4 less than that for the whole district. Its birth rate, however, only comes fourth, and is a fraction below that of the combined area. The inclusion of Bishopsteignton increases the population to 3,710.

Ashburton Rural has the lowest general death rate, viz., 11·8, a good figure ; there were only two deaths from zymotic disease, 1 being due to measles and 1 to whooping cough. The infantile mortality is, however, rather high, and the birth rate is at the bottom of the list.

Chudleigh shews the third best zymotic rate, comprising 4 deaths from whooping cough and 1 from typhoid fever, while the infantile mortality is fair ; its general death rate is, however, the highest, while the birth rate is just below that for the whole district. The population is reduced from 6,720 to 5,644 by the exclusion of the parish of Bishopsteignton.

The death rate of Newton Rural is a fraction less than that of Chudleigh, while the infantile mortality is somewhat higher, though the latter is just under the inclusive figure. The zymotic rate is the highest, measles, whooping cough and diarrhoea being each responsible for two fatalities. It is, however, first on the list as regards birth rate, this item being above the 10 years average of the combined area.

Moretonhampstead comes third as regards the death rate with 15·8, a fraction higher than that of the whole district ; the zymotic rate, due to 3 deaths from whooping cough, being 1·1. The infantile mortality works out at the high figure of 203—more than double that of last year. The birth rate occupies, like the death rate, a medium position.

ZYMOTIC DISEASES.—To the 7 ordinary zymotic diseases 17 deaths were assigned, as compared with 13 in 1903 and 7 in 1902, viz. :—3 to measles, 11 to whooping cough, 2 to diarrhoea, and 1 to typhoid fever, giving the annual rate of ·90 per 1,000 ; over 80 per cent. of this being due to measles and whooping cough. The figure for the previous ten years averages ·79.

The notifications were 37 in number, as against 60 in

Table of deaths occurring during the year 1904, in the several Sub-registration Districts of the Newton Abbot Rural Council, classified according to diseases and ages, and shewing death-rate, birth-rate, zymotic-rate, infantile mortality, and population of each locality.

SUB-REGISTRATION DISTRICTS.	BIRTHS.			DEATHS.							MORTALITY FROM SUBJOINING CAUSES.																
	Registered.	Birth-rate per 1,000 annually.	Population.	At all Ages.	Death-rate per 1,000 annually.	Under 1 year.	1 and under 5.	65 and upwards.	Under 1 Year to every 1000 births	From 7 Chief Zymotics.	Zymotic Death Rate	In Union House belongs to dist.	Small-pox.	Measles.	Scarlatina.	Diphtheria.	Whooping Cough.	Diarrhoea.	Cont'd Fevers (Typhoid, &c.)	Phthisis.	Other Tubercular Diseases.	Bronchitis, Pleurisy. Pneumonia.	Heart Diseases.	Cancer.	Violence.	All Other Diseases.	
Newton Rural	109	24.6	4,434	72	16.2	13	4	31	119	6	1.4	1	..	2	..	..	2	2	2	..	7	1	8	5	1	35
Chudleigh ..	121	21.4	5,644	94	16.7	13	3	41	107	5	.89	6	..	..	..	..	4	..	..	1	6	2	11	6	1	50
Ashburton Rural	45	18.3	2,460	29	11.8	7	6	9	155	2	.81	3	..	1	..	..	1	..	..	..	1	6	5	4	2	9
Moretonhampstead	59	22.2	2,654	42	15.8	12	7	9	203	3	1.1	1	..	..	..	..	3	..	..	..	6	1	6	3	1	19
Sea-border ..	78	21.0	3,710	48	12.9	5	1	29	64	1	.27	6	..	..	..	..	1	..	..	..	3	..	8	4	2	24
TOTALS, 1904.....	412	21.8	18,902	285	15.1	50	21	119	121	17	.90	17	..	3	11	2	2	1	23	6	35	38	22	7	137
Average for 10 yrs. 1894-1903.	505	23.1	21,859	331	15.1	56	23	130	112	17	.79	14	..	4	5	2	4.5	2.5	3.5	3.5	21	8	53	38	20	14	160
1903	344	18.2	18,902	236	12.5	29	14	99	84	13	.69	18	..	3	1	4	5	16	8	31	29	18	15	106
1902	446	23.6	18,902	279	14.8	43	6	134	96	7	.37	16	2	..	4	1	1	20	7	47	38	23	9	128
1901	396	21.0	18,902	275	14.5	48	19	105	121	18	.95	11	..	8	..	2	2	2	4	4	18	8	42	37	14	10	128
1900	465	21.7	21,455	342	15.9	54	33	137	116	12	.56	15	..	4	..	3	3	1	1	1	21	8	61	36	15	14	175
1899	487	22.7	21,483	375	17.5	73	24	149	150	31	1.4	12	..	10	..	2	8	6	5	23	5	44	48	22	13	189	

1903 :—14 scarlatina, of which one was in the Chudleigh sub-district, 2 in Moreton, and 11 in Sea Border ; 7 diphtheria, of which 3 were in Newton Rural, 2 in Chudleigh, and 2 in Moreton ; 5 typhoid fever, of which 1 was in Newton Rural, 3 in Chudleigh, and 1 in Moreton ; 8 erysipelas, of which 2 were in Newton Rural, 3 in Chudleigh, and 3 in Sea Border ; and 3 puerperal fever, for 2 of which Chudleigh was responsible, and 1 Sea Border.

This is the lowest number of notifications recorded since the Act came into operation in 1897.

The following table shews the monthly incidence.

DISEASE.	January	February.	March	April.	May	June	July.	August	September	October.	November	December	Total
Small Pox .....	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlatina	5	..	1	1	..	..	1	2	1	1	2	..	14
Diphtheria .....	..	..	..	3	..	3	..	1	..	..	..	..	7
Typhoid Fever .....	..	..	..	..	..	..	..	2	2	1	..	..	5
Erysipelas	1	1	..	2	..	..	1	..	..	1	..	2	8
Puerperal Fever .....	..	..	1	..	1	..	..	..	..	1	..	..	3
Cholera .....	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	6	1	2	6	1	3	2	5	3	4	2	2	37

MEASLES AND WHOOPING COUGH.—The latter of these diseases has been prevalent in various parts of the district. The northern parishes, particularly Moreton, Bovey, Lustleigh, North Bovey and Hennock suffered in the early months of the year ; while later on Dawlish West, Abbotskerswell, Kingsteignton, Ogwell, and Ilsington were also affected. Deaths occurred at Bovey (3), Dawlish W. (1), Hennock (1), Ilsington (1), Kingsteignton (2), and Moreton (3). Towards the end of the year measles made its appearance at Denbury, causing 2 deaths, also at Broadhempston (1 death), and Leusden. These affections, though they add appreciably to the general and zymotic death rates and increase the infant mortality, are independent of sanitary conditions. When a sufficient number of susceptible persons has accumulated, the introduction of the specific infection alone is required to produce an outbreak, which generally involves all not protected by a previous attack. Six of the fatalities from these diseases occurred in the spring or summer months,

and eight in the winter, the latter season being usually more fatal owing to chest complications induced by exposure to cold or wet.

SCARLET FEVER.—As in the previous year, a large proportion of the total number of notifications—14 out of 37—or 38 per cent. were due to this disease, which, however, was mostly confined to the Sea Border parishes. The limited outbreak at Bishopsteignton, which began at the end of 1902, was responsible for 5 further cases in the early part of the following year ; there were in this village 10 attacks in a little over two months. Four others were reported at Kingskerswell, one in March, two in August and one in September ; the three latter did not, however, appear to have any interassociation, but were the result of external infection. Manaton was responsible for two attacks, both in a remote corner of the parish, while isolated cases occurred at Stoke, Ideford and Cockington, the latter being in one of the buildings connected with the Torquay Sanatorium. Most of the above were of the usual mild type and no death resulted. Of the 14 notifications, 10 were between the ages of 5 and 15 years, 3 between 15 and 25, and 1 over the latter age.

DIPHTHERIA.—Seven notifications were recorded, compared with 10 in 1903, none of which, however, were fatal. Two of these were in a cottage in the village of North Bovey ; the first to be attacked was a young adult who had a short time previously been employed on drainage work, which was the probable cause of disease. As the family included several children another cottage was taken, with the object of removing thither all the healthy inmates, but I could not obtain the assent of the parents to this step till another child was infected ; this was eventually carried out and no further spread took place.

Three cases occurred at Coombe, in association with other sore throats, among the school children. One was in the month of April and the remaining two early in June. Only one of these was associated with obviously insanitary home conditions, but some suspicion was attached to the school closets, which have since been entirely reconstructed. Two of the patients were removed to the hospital at Newton, and the other was sufficiently isolated at home.

Isolated attacks were reported from the village of Chudleigh Knighton and from an outlying cottage also in the parish of Hennock, in the presence of faulty drainage conditions in each instance ; both these were treated in the Newton hospital.

Of the 7 notifications, 5 were between the ages of 5 and 15 years, 1 between 15 and 25, and 1 over the latter age.

TYPHOID FEVER.—The district was remarkably free from this disease (as also from diphtheria) during the past year, only 5 cases being reported, as compared with 17 in 1903 and 14 in 1902. The most serious, and only fatal attack, was in a young adult living in one of two isolated cottages in the parish of Bovey. The tenants derived their water supply from a well, but the pump got out of order and in the meantime recourse was had to a stream into the higher reaches of which sewage gets access. None of the other occupants of the cottage were affected, and I was told the water from this source was boiled before being used for drinking purposes, but the patient had apparently not always observed this precaution.

Hennock and Chudleigh were each responsible for a notification, but without any very evident cause, though there were some minor insanitary conditions in connection with the former; a mild case was also reported in a child at Sandygate in the parish of Kingsteignton.

The remaining attack was in a visitor in a house near North Bovey; this obviously originated outside the district. Two of the above were removed to hospital; two were unfit for removal, and the fifth (at North Bovey) was outside the hospital combination.

Of the five notifications, 2 were between the ages of 5 and 15, and 3 between 15 and 25.

ISOLATION HOSPITAL ACCOMMODATION.—Fourteen Rural parishes, within a radius of six miles from Newton Abbot, are in combination with that town in regard the hospital. In the typhoid fever wards there is accommodation for 8 adults; while the iron building affords 12 beds for scarlatinal patients.

The northern and more distant parishes are still unprovided for in this respect, as are also one or two of those nearer at hand. Bishopsteignton has joined the combination during the past year.

Houses are limewashed and disinfected where necessary and there is a steam apparatus for dealing with clothes and bedding at the hospital. Disinfectants are supplied by the authority and can be obtained at the following places:—Abbotskerswell, Mr. R. Chudleigh; Bishopsteignton, Mr. R. Berry; Bovey Tracey, Mr. F.

Steer ; Broadhempston, Mr. W. Atwill ; Chudleigh, Mr. R. Collings ; Chudleigh Knighton, Mr. T. Gibbs ; Cockington, Mr. W. Dyer ; Dawlish West, Mr. R. Coombes ; Denbury, Mr. T. Binmore ; Ipplepen, Mr. S. Lang ; Kingskerswell, Mr. R. Ford ; Kingsteignton, Mr. T. Lang ; Lustleigh, Mr. E. Arnold ; Moretonhampstead, Mr. L. Endacott ; and Widecombe, Mr. T. Nosworthy.

DAIRIES AND SLAUGHTERHOUSES. —The model regulations of the Local Government Board of 1899, under the Dairies, Cowsheds and Milkshops' Order, are in force throughout the district. The dairies are regularly inspected by myself and the Sanitary Inspectors, and the water supplies will in time be all examined. These with the slaughterhouses, to which periodical visits are also paid, are on the register, which will be kept up-to-date from year to year. Those dairies, supplying milk to the borough of Torquay, are also visited by the sanitary authorities of that town, under a special Act of Parliament. A copy of the regulations has been sent to all cowkeepers and dairymen.

OFFENSIVE TRADES.—Urban powers are in force over the whole district in respect to these (Public Health Act, 1875, sections 112—114) and in future no offensive trade may be established without the consent of the authority. The Local Government model bye-laws, which regulate the structure of such premises and the carrying on of the business, have been adopted by the Council and are now in force.

HOUSING OF THE WORKING CLASSES.—No cases of overcrowding have been dealt with during the past year, but I found some evidence of it during the course of a house-to-house inspection at Bovey, which will be alluded to in more detail further on. In places where sufficient accommodation is not to be had, it is difficult to deal with without creating hardship, if the occupants are all members of the same family, and not lodgers. Other localities seem to be more attractive to the speculative builder ; at Kingsteignton for instance, 22 new dwellings have been erected during the past year, and more are in course of construction ; the pressure in this little town is, therefore, being relieved. In the more purely rural parts of the district where the agricultural laborer has to be provided for at a rent within his reach, the field of building at a profit is necessarily small ; but the lack of good cottages is one of the factors which is helping to

centralize the population in urban communities, added to the attractions of town life and the prospect of better wages which artizan labor commands. The question of revising the bye-laws as regards new buildings has been raised, with a view to relaxing some of the present provisions, and I think this should be carefully considered. For instance the clause which provides that the material shall be of brick, stone, or other incombustible material, with certain thicknesses prescribed, is a very rigid one, and though necessary no doubt where dwellings are packed together in rows—to minimise risk from fire—cheaper and equally sanitary houses could be devised by some less substantial material for thinly populated districts. Galvanized iron buildings with wood framing—to be erected on stone or brick foundations, are to be obtained of several firms in stock sizes; though probably they could be very well made by local builders. These might be allowed as detached houses only—preferably of one storey—and at a reasonable distance from any neighbouring house; the fire danger would in such a case be very inconsiderable. I would recommend those interested in the subject to read a series of articles which appeared in the “Worlds Work and Play,” commencing with the October number (1904) of that magazine. This goes into the subject fully, considering the different materials available, with the probable cost, and it will be seen that a considerable saving might be effected. What is wanted is cottages at a rental of about 2/6 per week (to include outs), with 3 bedrooms, and all the accommodation that can be afforded in a rural district. Many of the old structures only fetch from 1/- to 1/6 a week, but no modern building, it is probable, could be profitable for this sum. If there is not sufficient inducement for builders or landowners to cater for this want, the other alternative is that authorities themselves should step into the breach and provide the necessary accommodation; this course, however, one would hesitate to recommend except as a last resort.

HOUSE TO HOUSE INSPECTIONS have been made at Chudleigh, Bovey Tracey, and Coombe; these will be noticed under their respective parishes.

SANITARY CONDITIONS & PROCEDURE.

Abbotskerswell population 457—acreage 1486. The water question has now been satisfactorily settled in this village, and after an enquiry held in the early part of year, the L. G. Board sanctioned the scheme prepared by the Torquay Water Engineer, by which a supply was provided by the Corporation of that town, from their reservoir on the Wolborough Hill at Newton Abbot. The work was commenced forthwith, and successfully carried out by the end of the year, except that the small reservoir at Aller, to accommodate a few houses in the eastern extremity of the parish, has yet to be completed. This will bring a good and sufficient water supply within the reach of the majority of the parishioners, and will replace the various shallow and sometimes polluted wells which were previously resorted to—often at a considerable distance. It will also enable closets to be flushed and add inducement for building in this prettily situated village. The main was extended to St. Augustine's Priory, the chief buildings of which are situated in the Newton Urban District.

The greater part of the sewage (including several water closets) finds its way into the brook and when the flow is small in summer, nuisance arises, especially at the lower end of the village. The question is not a very easy one, but a beginning has been made by the construction of 250 feet of sewer to accommodate some houses on the manor hill, whereby a considerable nuisance, arising from the discharge of drains into the roadside gutter, has been abolished. A further section is (or will be before the coming summer months) needed to take the drainage from the schools and adjoining houses on both sides of the road, and also to carry the present outfall further away from dwellings. The remaining portion, if carried out by degrees, should not be an undue burden on the parish.

With the exception of some whooping cough among the children, no infectious disease has been reported.

NEW WORK. Besides the water supply and sewer above alluded to, the drainage of 3 dwellings has been put in order.

Bickington population 215—acreage 1403. The parish depends for its water on private wells, which are, however, not very satisfactory. Owing to the lack of water in the higher part of the village some of the

occupants of cottages have to fetch it from a distance ; the school has no supply. The feoffee well is not of very good quality and is only available for slop purposes ; its loss when the pump was out of order for some weeks was, however, felt to some extent. This has now been repaired.

With the exception of whooping cough in the early part of the year, the parish was free from infectious disease ; no death was recorded from any cause in 1904.

Two new cottages have been built ; the drainage of 4 houses was renewed.

Bishopsteignton population 1076—acreage 4449. Water supply is derived mainly from two deep springs under the Haldon greensand ; there are two covered reservoirs containing together about 120,000 gallons. There is also a third spring with small reservoir, but this is inconsiderable. This water is of excellent quality, but in previous dry summers there has been a shortage ; the supply, however, was constant, except for about a month, during 1904. Some attempts have been made to augment the quantity, but hitherto without success, and there does not appear to be any available local source ; it is, however, possible that the new Teignmouth scheme will afford a solution of the question. Not only is the village a large consumer from various reasons, but latterly some tendency to build has manifested itself, pointing to increasing demand in the future.

SEWERAGE. Water closets are general ; the sewers are all piped except a piece above the church, extending up Fore Street. There are three chief outfalls, one of which has a settling tank ; that in West Town meadow, after being managed by the authority for nearly two years, during which there were no complaints, has reverted to the tenant ; I consider this rather a retrograde step.

NEW WORK. A further extension of the sewer in Radway Street has been made for a distance of 400 feet ; by this means the sewerage of the upper part of this street has been diverted from the brook to the lower outfall ; owners of property have been called on to connect where necessary. In addition a large ventilating shaft has been erected ; the sewerage of this part of the village has now been completed.

Ten new houses have been built ; a great addition to the cottage accommodation and also an indication of increasing prosperity ; it is a long time since building

operations have been so vigorous. The drainage of four dwellings has been put in order.

There were 5 mild cases of scarlatina in January and some whooping cough towards the end of the year ; the parish is now included in the Newton hospital combination.

Bishopsteignton has been transferred from the Chudleigh to the Teignmouth sub-Registration district, and therefore now comes under Sea Border.

LUTON. A village of about 20 houses in this parish ; has a good and abundant water supply piped down from a Haldon spring ; there is a reservoir containing about 5,000 gallons. The mains have been cleared and new taps provided.

Closets are mostly on the dry system and there are no sewers.

The hamlet of ASHWELL is supplied by an excellent spring of water.

The death-rate of the parish, 9·3, is the lowest of those containing over 1,000 inhabitants.

Bovey Tracey population 2694—acreage 7567. Water supply is from Yarner spring and is of the usual type of a good granitic water. The new reservoir on Trendlebeer Down, of a capacity of 3,000,000 gallons, was completed during the past summer, and the main laid to Brookfield and Wreyland ; neither, however, were available before the winter rains enabled the reservoir to fill ; it is to be hoped that this husbanding of the resources will put the water question at rest for some time to come. There is also a home reservoir containing 250,000 gallons, above the church, but owing to defects this is not available to its full capacity.

SEWERAGE. Water closets are general, but owing to the shortage of water in previous years, many are not flushed ; these will now be dealt with as occasion offers. All the sewers are piped ; there are two main outfalls with settling tanks, one of which is covered. A Local Government Board enquiry has been held to consider a further scheme dealing with the whole sewerage of the town, including the suburb of Brimley, where some building operations have latterly been proceeding ; this however, was not accepted on the ground that a sufficient irrigation area was not provided at the outfall ; so that this question is still unsettled.

House refuse is removed as required.

NEW WORK. The water main has been extended 1,200 feet to supply the Devon House of Mercy. Seven new houses have been built; and the drainage of 5 dwellings has been renewed. Lower Coombe Farm has been provided with an efficient water supply brought in by gravitation.

There was one case of typhoid fever during the past year, which ended fatally; whooping cough was prevalent in the early spring, causing 3 deaths.

The death rate has risen from 10·0 in 1903 to 14·8 in 1904; but this is the lowest of all the larger centres of population in the district with the exception of Bishops-teignton.

BROOKFIELD AND WREYLAND. These villages, though in the parish of Bovey, are geographically more closely connected with Lustleigh. The main from the reservoir on Trendlebeer Down is now completed, and this source of supply available, supplanting the previous wells, which were, as a rule, unsatisfactory both as to quantity and quality.

The sewers form part of the Lustleigh system; there are two branches, one of which can be flushed from the river.

At HEATHFIELD, also in this parish, the long row of cottages (32 in number) is supplied by the Torquay water; they have a private sewer, with outfall in an adjacent meadow; the closets have all been flushed during the past year.

Owing to complaints as to the lack of sufficient cottage accommodation at Bovey Tracey, and consequent overcrowding, I made a house to house inspection of this class of dwelling in different parts of the town. In the course of this I visited 143 tenements, of which 11 contained six rooms, 21 five rooms, 58 four rooms, 48 three rooms, 3 two rooms, and 2 were of the one room type. In this connection only living rooms were reckoned, and not back kitchens or sculleries. The population of these consisted of 610 persons, of whom 390 were adults and 220 under 15. The average number of persons per house was 4·3; of persons per room 1·1. Rents, of course, differed considerably with the size of the house and the accommodation afforded; those having 5 or 6 rooms are nearly all modern. The rent of a 6-roomed house varied from a minimum of 3/5 a week to 5/4, averaging 4/8; a cottage of 5 rooms can be obtained for a sum ranging from

2/9 to 5/-, with a mean of 4/2½; of 4 rooms from 2/3 to 5/-, with a mean of 3/4; of 3 rooms from 1/4 to 3/3, with a mean of 2/8. The rent per room per week worked out at an average of 10d. over the whole, with extreme limits of 5½d. to 1/3. These figures included outs; in some cases where these are paid by the tenant, I added an estimated sum. For purposes of comparison, the following table, with statistics of a similar investigation made in Newton in 1903, may be of interest.

Locality.	Population			Houses	Persons per house	Persons per Room.	Rent per Room.	Average rent of 3, 4 and 5 roomed tenements per week.		
	Adults:	Under 15	Total.					3	4	
22 Courts	298	253	551	149	3·7	1·3	0/11	2/8	3/2	...
Bowden's Hill.....	429	279	708	163	4·3	·85	1/0½	...	...	5/1½
Hillman's Meadow	237	142	379	90	4·2	·83	1/1½	...	...	5/6
Bovey Tracey.....	390	220	610	143	4·3	1·1	0/10	2/8	3/4	4/

In making a comparison, it should be remembered that the above Courts are, speaking generally, the oldest and most unsatisfactory type of dwelling in Newton, with very restricted air space and lack of through ventilation, while with very few exceptions, the Bovey cottages have through ventilation, plenty of open space, and a plot of garden, often of considerable size, so that for what is practically the same rent in the case of 3 and 4 roomed tenements, very much better conditions obtain. Many of them are, however, old and with low rooms; at the same time roof and walls were generally in fairly good order. The rents of the 5 roomed type are appreciably lower in Bovey; these are, as before mentioned, a better class of house as a rule.

A certain amount of overcrowding was in evidence, but only in two or three instances was this due to lodgers; these latter can be dealt with; on the other hand, some of the larger dwellings were not occupied to their full capacity. On all sides the difficulty of getting suitable cottages was urged; I did not find one house empty. It is evident that more accommodation in the way of working class houses is much needed in this little town.

Broadhempston population 445—acreage 2,200. Water supply is derived from wells—mostly in the shale, which

is the geological formation of the neighbourhood ; there is sometimes a deficiency in dry weather. The well in the road near the church, alluded to in my last year's report, has still further improved since the reconstruction of the adjacent faulty drainage, and has been used for slop water to a considerable extent.

There is one sewer—nearly all piped—with outfall in an orchard, but not a great deal of water closet sewage ; 100 feet of sewer was relaid during the past year at the top of Stoop Hill. One new house has been built and drainage accommodating 5 dwellings reconstructed. The majority of private drains in this village have now been put in order.

Infectious disease was confined to an outbreak of measles in December, causing 1 death ; whooping cough was also prevalent.

Buckland population 87—acreage 1,493. Again no death has been recorded in this parish—for the fifth year in succession. The waters are of the granitic type, the geological formation of the neighbourhood, and are pure and abundant ; closets are on the dry system and there are no sewers.

No cases of infectious disease were reported.

Chudleigh population 1,820—acreage 6,128. Water supply is derived from the Kennel spring, about 2 miles from the town ; this is of the excellent quality usually yielded by the Haldon greensand or the limestone which underlies it, these being the geological characteristics of the locality. The normal yield is about 70,000 gallons a day, and being a deep spring there is not very much variation, but the town is limited to 40,000 gallons under the terms of their agreement, in ordinary times. As this was found insufficient to meet the modern demands for water without conserving the nocturnal flow, a L.G. Board enquiry was held in the early part of the year to consider plans for a new reservoir of 70,000 gallons capacity to be constructed at the intake ; these were accepted, and the work has since been successfully carried out ; there is no doubt that the best policy has been adopted to put the water supply of this town on a relatively permanent basis.

SEWERAGE. Water closets are general ; the sewers are all piped except a portion of about 300 yards of the main sewer. There are two chief outfalls, which irrigate meadows, but no settling tanks.

NEW WORK. A new sewer has been laid to accommodate the Parade—a length of 530 feet.

One new house has been built ; 12 drainage systems in connection with 22 houses have been renewed, mostly as a result of a house to house inspection in the old Exeter Road ; a few in this street still remain to be dealt with,

Infectious disease was limited in 1904 to a mild case of typhoid fever.

The death rate of the town was 18·1, as compared with 13·7 in the previous year, but there were no deaths from the 7 ordinary zymotics, and out of the total of 33 deaths 3 were in the Union House in persons belonging to the parish.

Cockington population 265—acreage 1,451. The village of that name is supplied partly by the Torquay water and partly from a private source belonging to Mr. Mallock.

At EDGINSWELL there is a public well ; this has been known to run short, but there were no complaints in 1904.

SHIPHAY COLLATON has one public well of good quality.

Closets generally are on the dry system ; there is one short sewer at Edginswell.

No sanitary work of importance was carried out last year.

Besides an outbreak of measles commencing at the end of the year, there was 1 case of scarlatina in a child living on the premises of the Torquay Sanatorium, and I have advised the managers of the Shiphay Collaton school, at which this patient attended, that, owing to the risk of infection involved, he should, in my opinion, be permanently excluded.

Coffinswell and Dacombe population 201—acreage 1,152. There are three public dipping springs, two at the former village and one at the latter. These are good both in quantity and quality, but open to the liabilities of pollution entailed by all dipping springs or wells.

There are no sewers, and closets are generally on the dry system.

The school closets are not very satisfactory, but I understand that this is to be attended to shortly.

No sanitary work of importance was carried out during the past year. No infectious disease was reported.

Coombe and Haccombe population 358—acreage 2,004. The water is derived from private wells ; there have been no complaints in 1904 as to scarcity.

Shales and sandstone are mostly the geological features.

There are no sewers and few water closets ; the drainage mostly finds its way into the brook which runs through the village. I had some complaints as to nuisance arising from this below the bridge ; as a consequence the brook was cleaned out and obstructions to the flow of water removed ; this under present circumstances should be done periodically in the summer months.

There were 3 cases of diphtheria among the children,

accompanied by some sore throats in the spring and early summer months, but without fatality. In this connection the school closets were reconstructed and the drainage in connection with 3 houses renewed. Also 4 new earth closets were provided.

Two new houses have been built.

I give the results of a house-to-house inspection of the hamlet of Netherton, in the same parish. Here I visited 16 cottages, 5 of which were of the 3 roomed type—a kitchen and 2 bedrooms—6 had 4 rooms, and the remaining 5 had 5 or more rooms, only living rooms being reckoned, not washhouse or back scullery. The tenants numbered 60, of whom 43 were adults and 17 below the age of 15 years, and the average number of persons per house was 3·7 and of persons per room ·87. Rents vary from £2 a year to £7 4s. (including outs) ; the average rent per room works out a trifle under 4½d. per week—a low figure ; the cottages are mostly old and have low ceilings, but they are kept in very fair condition as to roof and walls, which are, generally speaking, thatch and cob respectively. Nearly all have through ventilation, and enjoy a fair sized garden. Some of them have, however, to fetch their drinking water from a little distance ; there is a public dipping spring, and I have had no complaints of shortage from this source. Closets are on the dry system, and some require attention.

Dawlish West population 678—acreage 3,870. Cofton and Middlewood are supplied with water from Starcross ; Westwood by a well. These are not very satisfactory owing to the pressure in the former case being insufficient to reach the houses on the higher levels, and to the absence, therefore, of means for flushing closets and sewers.

The houses at Mount Pleasant are supplied by deep wells in the sandstone, which is the general formation of the locality. The hamlet of Dawlish Water, including several dairy farms, also depends on wells ; there has, as far as I am aware, been no scarcity in these during 1904. Various schemes have been considered by which an efficient water supply can be negotiated for the parish.

The Shutterton Bridge spring would besides other expenses involve a permanent charge for pumping to a suitable level ; and owing to the low pressure of the Starcross supply, the same operation would of necessity accompany any attempt to solve the question by making use of the present source ; and this would only benefit Cofton and leave Mount Pleasant and Dawlish Water untouched. The latter locality presents an admirable site for the future development of the parish, and has a claim to be considered. Under these circumstances the Dawlish Urban Council have again been approached with a view to obtaining a supply from their mains for the whole

parish ; I have no doubt that if terms satisfactory to both parties can be arranged this is the best solution of the difficulty. Not only is the quality of the water above suspicion, but the elevation is sufficient to admit of a supply by gravitation being taken both to Cofton and Mount Pleasant ; the present Dawlish main runs through the Dawlish Water valley, and could be easily utilized if required.

The sewers from the ravines at Westwood and Middlewood are discharged into separate tanks at the level of the stream ; these are cleaned out periodically ; the Cockwood sewer discharges into the estuary of the Exe. Water closets are general, but few are flushed.

The drainage of 4 houses has been renewed.

Except for an outbreak of whooping cough among the children in the summer (1 death) the parish has been free from infectious disease.

Denbury and Torbryan population 448—acreage 3,002. The water supply is derived from two adjacent springs ; there is a small reservoir containing about 10,000 gallons. From this it is distributed to the village by means of stand pipes, only one or two houses having their own service. The water is of excellent quality, but there is a shortage during the late summer months and at present none of the closets—26 in all—are flushed from this source. The rectory and two other large houses have an independent supply by gravitation. An attempt to add to the quantity by opening up an old well near the site of the reservoir having been found impracticable, owing to insufficient elevation, a scheme for increasing the storage is under consideration. This is at present not a developing parish, which would warrant any considerable outlay in this direction, but at the same time some improvement is called for ; possibly at some future time the Paignton mains, which come within a short distance may be utilised to supplement the local resources.

There are two main sewers which unite to form a common outfall, discharging into a fissure in the limestone rock, upon which formation the parish is mainly situated.

The drainage of 5 houses has been reconstructed ; 3 dwellings have been provided with earth closets.

The village of **TORBRYAN** has a good and abundant water supply brought in by gravitation.

Closets are on the dry system and there are no sewers.

The drainage of 2 dwellings has been put in order and 4 earth closets provided ; one new house has been built.

Measles broke out among the children at the end of the year, causing 2 deaths and necessitating the closing of the school.

Hennock population 711—acreage 3299. This parish embraces part of the low-lying area of the Teign Valley, as well as some granite uplands of considerable elevation. On these latter, the village of Hennock, containing about 160 persons, with 40 houses, occupies an isolated position at about 700 feet above sea level. The water supply is obtained from a spring rising in the vicarage garden; this runs in a partly open channel to a shute. The water is of good quality, but some of the residents have to go a distance to fetch it. To pipe this water through the village would be a comparatively small matter, and would be a great convenience to many.

There is a sewer in Bell Lane, but privies are general.

CHUDLEIGH KNIGHTON, with 73 houses and about 350 inhabitants, lies in the valley; it has two public wells of fair quality, besides about half a dozen private ones. Some of the latter, however, fail in dry seasons and at the best of times many of the inhabitants have to fetch water from a distance, and there are 17 hand flushed closets. The school is also without a supply. A scheme to provide the village with water from the Torquay mains was prepared and a Local Government Board enquiry held in December, 1903; the site of the proposed reservoir—a water tower on Knighton Heath—was, however, not considered satisfactory, and some delay ensued pending the acquisition of a piece of land at a sufficient elevation for the purpose; the work, though not yet begun, will, it is anticipated, be shortly in hand.

There is one sewer which discharges into the brook.

Both the public wells have been cleaned out and necessary repairs done. A new vicarage is in course of construction. Three drainage systems, serving 20 houses have been renewed. The water supply of Lower Crockham Farm and adjoining cottage has been improved.

At **TOTTIFORD**, on the Torquay watershed, temporary wooden bungalows have been erected to accommodate 40 men. Two cases of diphtheria and one of typhoid fever were recorded in the parish during 1904; there was also an outbreak of whooping cough in the spring with one fatality.

Ideford population 254—acreage 1440. This village is pleasantly situated on the slopes of Haldon, from which it obtains a pure and abundant water supply. There is a reservoir containing about 30,000 gallons, but this has not a sufficient elevation to supply the schools, rectory, and about half a dozen adjoining cottages, which have a separate service from a small auxiliary tank at a higher level. Much of the main, especially that belonging to the latter, has become corroded, and plans for a new high level reservoir of 10,000 gallons capacity, from which the whole village can be supplied,

including provision for renewing the mains where necessary, have been submitted to the Local Government Board, and it is probable that an enquiry will shortly be held.

The water supply of OLCARD, a hamlet about a mile distant, is not altogether satisfactory, as two or three of the wells run dry in summer.

There are no sewers and closets are of the privy type.

No work of importance was carried out during the past year.

An isolated case of scarlatina occurred in the summer, and, in common with many other parishes in the district, whooping cough has been prevalent among the children; there was, however, no fatality.

Ilsington population 886—acreage 7843. This parish has a large area and contains several villages. Like that of Hennock, it lies partly on high ground of granitic origin, and partly on the low-lying clay formation of the Teign valley. The village which gives its name to the district—650 feet above sea level (with about 25 houses)—is supplied by a stream rising on Haytor Down, but, this being open to the road at various points, and, running through cultivated ground, suffers accordingly.

Livaton, Cold East and Halford are in the valley below. They are dependent on wells, many of which, especially at Cold East, are of inferior quality. There is, however, one public well at Livaton, and one belonging to some parish property at Halford, which are quite potable, but the clay formation of this neighbourhood generally yields indifferent waters. The scheme which has been prepared for piping the Haytor Down stream from its source with provision for supplying Ilsington, Livaton, Cold East, Halford, with the hamlets of Pinchaford and Brimley and a branch to Blackpool School—at present dependent on a shallow well of somewhat indifferent quality—is still in abeyance. Difficulties of negotiating permission to collect the water by laying pipes in the granitic sand which underlies the somewhat boggy source of the stream, and further to build the necessary reservoir, have arisen. Seeing that the neighbourhood of the intake is much resorted to by picnic parties in the summer months, I think this course is highly desirable to prevent any possible pollution. This water scheme, besides being of great benefit to the parish as a whole, will tend to further assist the development of the Haytor neighbourhood, where a tendency to build has of late years manifested itself, possessing as it does many advantages for a holiday and tourist resort.

Four new houses have been built during the past year. the drainage of one dwelling has been put in order. Most of

the closets are of the privy type, except at Livaton, where water closets are more numerous ; these, however, are as a rule not flushed. There are no sewers. The drainage of one house has been renewed. With the exception of some cases of whooping cough, resulting in one fatality, the parish was free from infectious disease ; it had the low death rate of 7·9.

Ipplepen population 789—acreage 2887. An upland village, on a shale and limestone formation, dependent on wells—in many cases of inferior quality. The Paignton water scheme, after much delay, may be said to be approaching completion, so that it is to be hoped that this question will be satisfactorily solved at no distant date. A suitable site has been settled on for the reservoir.

There are a good many water closets—without flush in most cases ; the sewerage, which is mostly of modern construction, is piped throughout and is all brought to one outfall in a meadow ; a portion, which was in the hands of a private owner, has been acquired by the authority.

The drainage of 3 houses has been renewed.

No infectious disease was reported in 1904.

It is to be hoped that the Great Western Railway Company will see their way to providing a station as near the village as possible on the proposed new line. There is at present no accommodation for this or the neighbouring villages of Denbury and Broadhempston and such a provision would be to the advantage of all the neighbourhood and would do much to give an impetus to its development. In these days communities lying at any distance from a railway tend to stagnate, and both in the residential and agricultural interests of the district a great boon might thus be conferred upon a numerous population and a rich district.

Kingskerswell population 1,027—acreage 1,797. A large residential village occupying a position nearly midway between Newton Abbot and Torquay, whose water supply it shares ; a few wells still remain in use. Water closets are general ; there are two sewer outfalls ; both of these have settling tanks, the overflow from which irrigates meadow land ; they are managed by the authority. The sewers are piped throughout.

NEW WORK. 1,900 feet of new sewer was laid in the past year, to accommodate a district north of the village which has hitherto drained into the stream, causing some nuisance.

700 feet of new water main has been put down.

Some tendency to build has been displaying itself here of late, and 7 new houses were built in 1904 ; 3 old cob and thatch cottages have been destroyed, and are being replaced by modern dwellings ; these are signs of future prosperity.

Three drainage systems, serving 9 houses have been renewed.

WHILBOROUGH, a hamlet in this parish, has a public well of fair quality, but there is often a shortage in summer. This has been closed as a dipping well and a pump provided.

Four cases of scarlatina were reported, but there were no deaths from zymotic disease.

The death rate was 17.5—a rebound from the low figure of the previous year—11.7—but out of the total of 18 fatalities 3 were in the Union House in persons belonging to the parish ; no less than 7 deaths were assigned to apoplexy.

Kingsteignton population 1,942—acreage 3,975. This rapidly increasing little town is situated in the Teign valley, about a mile from Newton, and derives its prosperity largely from the clay industry of the neighbourhood. It has an excellent water supply from a limestone spring, known as the Holy-well in Ugbrook Park. As the proportion of the daily flow granted to the parish is unequal to meet the growing demand, it has become necessary to store the nocturnal yield ; plans for a reservoir near the intake were prepared by Mr. Segar and accepted by the L.G. Board after an enquiry held in the summer ; the work is shortly to be put in hand ; the capacity is 85,000 gallons. The sewers are all piped with the exception of the main artery, which is a large 2-foot culvert, extending from the centre of the village to the eastern outfall ; this and the other outfall irrigate meadows ; both are managed by the authority.

NEW WORK. A further large instalment of private drainage improvement has been carried out, and 17 drainage systems, accommodating 32 houses, have been renewed ; 33 closets were flushed.

Building operations are still very active ; 22 new dwellings (which means accommodation for about 100 persons) were erected in 1904, and more are in course of construction ; all this points to an era of general prosperity.

PRESTON and SANDYGATE, hamlets in the parish, are well supplied with water from the Kingsteignton mains.

With the exception of an outbreak of whooping cough in the spring, which caused two fatalities, infectious disease was limited to a mild case of typhoid fever in a child at Sandygate, so that, as in 1902, the town has been free from the more serious types of zymotic disease. There were, however, two deaths from diarrhœa.

The general death rate was 20.1—a somewhat high figure—last year this was 18.5.

Lustleigh population 400—acreage 2,978. A picturesque village lying in a healthy and sheltered site on the

borders of the moor ; granite is the main geological feature. The chief incident of the year was the installation of the water supply from South Harton spring. There is a reservoir containing 50,000 gallons at the intake, and the water is of the usual pure and soft granitic character. The normal yield of the spring is about 8,000 gallons daily with a minimum dry weather flow of 6,000. This, coinciding with the introduction of the Bovey water into the villages of Brookfield and Wreylan, should give an impetus to the development of this locality, which nature has endowed with every attraction.

NEW WORK. 200 feet of sewer has been relaid.

Four new houses have been built, and 5 drainage systems, serving 8 dwellings, have been renewed.

With the exception of some whooping cough, but without fatality, the parish has been free from infectious disease.

Manaton population 315—acreage 6,422. A moorland and sparsely populated parish, at an elevation of 800 feet above sea level, depends on wells chiefly ; the waters are of the granitic type, and are generally abundant and of good quality. There is a short sewer crossing the green, but closets are generally of the privy type.

Three new houses have been built—but no sanitary work of importance has been carried out.

There were two mild cases of scarlatina in an outlying part of the parish in the autumn.

Moretonhampstead population 1,541—acreage 7,910. This moorland town is situated at an elevation of nearly 700 feet above sea level. The water is derived from various granitic springs at Moor, about two miles from the town, and is good and abundant ; there is a storage reservoir of about 100,000 gallons capacity. Water closets are general ; these are as a rule well flushed.

The new sewerage system has been completed except as to the irrigation channels at the outfall, which is about a mile below the town ; these are, however, being proceeded with.

This system will require constant and careful attention to ensure its proper working. The upper portion has two divisions, one descending the Station Road, and the other following the course of the Kinsmansdale brook, both at a considerable fall ; from the junction of these two at the foot of the hill there is about a mile of comparatively level ground till the outfall is reached. Storm water overflows, with fenders, are provided at different points, and to prevent an accumulated head of water exercising too great a pressure on the pipes in the valley below, the system of “throthling” has been introduced in two places ; chokage has occurred at these

points owing to foreign bodies (sticks, &c.,) being there arrested. A large area of ground is drained of its surface water, especially by the Kinsmansdale branch, and it is this which gives rise to trouble.

A L.G. Board enquiry was held late in the year to obtain a loan for a further sum of £500, which had been found necessary to complete the work.

House refuse is removed twice a week.

NEW WORK. The water main has been extended 200 feet to accommodate some houses (existing and building) on the Chagford Road. Three new houses have been built.

The drainage of 4 dwellings has been renewed.

The hamlet of Docombe, on the Exeter Road, about 750 feet above sea level, is supplied with water by one spring and several wells, generally of very fair quality.

There was an outbreak of whooping cough among the children in the spring, with three deaths ; with this exception the town was free from zymotic disease.

There were 27 deaths, resulting in a rate of 17·5—the same as that for Kingskerswell, and also identical with the figures of 1903.

North Bovey population 398—acreage 5,589. This parish is on the borders of the moor and adjoins that of Moreton. The village has one public well on the green, besides private wells. The former shewed on analysis some evidence of pollution, and on investigation a stone drain or sewer conveying chiefly surface water was found at no great distance. This is to be replaced by piping. Closets are mostly on the dry system.

There were two attacks of diphtheria during the spring, for which, however, the village cannot be considered responsible. A case of typhoid fever was reported in an outlying house ; this also had an external origin. Whooping cough was prevalent in the early part of the year ; there was, however, no fatality from these diseases. Only one death was registered in the parish in 1904.

Ogwell population 250—acreage 2,089. The water supply is derived from a deep well about a mile from the village ; the water from this is pumped into a reservoir by a windmill, and thence distributed by means of stand-pipes. This source has failed at times owing to the mechanism getting out of order ; but there is a spring in the centre of the village, which has always afforded a good yield.

Closet accommodation is of the privy type, and there are no sewers.

The vicarage drains have been reconstructed ; some improvement has been effected in the water supply of several outlying cottages.

With the exception of whooping cough, the village has been free from infectious disease.

Stoke population 463—acreage 2,167. There are two public pumps and many private wells ; this is a sandstone district, which generally yields a plentiful supply. There is one small sewer, which discharges into the brook, but there are few water closets.

The hamlets of MAIDENCOMBE & HIGHER GABWELL, in the same parish, are also supplied by wells.

Some trouble has arisen with the school drainage, which became choked in the latter end of December ; this is in process of reconstruction.

One new house has been built.

The solitary notification from infectious disease was a scarlatina attack in an adult.

Teigngrace population 190—acreage 1,496. A small and sparsely populated parish in the Teign valley. The water is mostly derived from wells, but these are generally of the moderate or indifferent quality yielded by the clay formation of the neighbourhood.

The drainage systems of two blocks of cottages (7 in all) have been reconstructed, and 4 pail privies provided.

There was no infectious disease, and the death rate for 1904 was nil.

Trusham population 165—acreage 625. This is considerably the smallest parish in the district in area, and all but the least in population. The village occupies an isolated position on the western slopes of Haldon at an elevation of about 300 feet. There is one public dipping spring of fair quality, which has in former dry years run short ; but I had no complaints in 1904. There are also a few private wells in the lower part of the village, but those living on the summit have to fetch their water from some little distance, and I do not see any remedy for this at present.

There are no sewers ; closets are mostly of the privy type.

A small but increasing local industry is afforded by the quarries near the station, from which a hard type of trap rock is obtained, much used for road metalling ; the provision of cottages near this work affords an opening for building enterprise.

The parish remains free from infectious disease, with the

exception of some whooping cough early in the year ; the general death rate appears to be very high, but the population is so small that this is no indication of the health of the parish.

Widecombe population 657—acreage 10,786. This moorland parish is the largest in area in the district, and has a considerable proportion of uncultivated land. The villages of Widecombe, Lower Town, and Ponsworthy contain the majority of the inhabitants. The granite formation of the locality yields, generally speaking, pure, soft and abundant waters. Many of the houses in Widecombe are supplied by a spring on the glebe land, brought in by gravitation ; there is also a public dipping spring of very fair quality.

PONSWORTHY has two good springs, while LOWER TOWN depends on wells ; there is a little shortage here in dry seasons, but I had no complaints last year.

The water supply of 4 cottages has been improved.

There are few water closets, and no sewers ; privies are general. One new house has been built.

Late in December an outbreak of measles occurred at Leusden, necessitating the closure of the school ; otherwise there has been no infectious disease.

Woodland population 170—acreage 1,634. This is another parish of purely rural type, in which moreover there are no centres of population. Shales and slates predominate ; the latter are quarried to a small extent. Water is derived from wells, and is generally abundant.

The drainage of 3 houses has been put in order, and the water supply of Pulsford cottages improved.

The parish was free from infectious disease.

The details of Mr. Rogers' (the Sanitary Inspector) report have been incorporated under the different parishes, but in addition to this I append a table shewing the sanitary work done in each parish for purposes of comparison ; it will be seen, that as usual, a large amount of improvement has been effected. 72 legal and 184 intimation notices have been served during the year, which have either been complied with or are being followed up ; no prosecutions were called for. 75 drainage systems have been put in order, in connection with 145 houses, necessitating 121 tests ; 116 closets were flushed and 16 earth closets (or pail privies) provided, mostly in place of old pit privies. 27 rooms were disinfected with the formalin lamp after infectious disease by Mr. Rowden, the assistant inspector.

About 3,380 feet of new sewer was laid in the district, as

TABLE SHOWING SANITARY WORK CARRIED OUT IN THE
DIFFERENT PARISHES IN 1904.

PARISHES.	New houses.	New sewers.	Water supply.	Old houses.			Drain tests.	Houses fumigated and disinfected.
				New drains.	Houses served.	Closets flushed.		
Abbotskerswell ... ..	...	250 feet	new public supply	1	3	2	1	...
Bickington	2	...	Parish pump repaired	2	4	1 & 1 E.C.	...	...
Bishopsteignton	10	400 feet	{ Luton water mains	3	4	4	5	8
Bovey Tracey	7	...	cleared	5	5	35	7	...
Broadhempston	1	100 feet	1200 feet new main	2	5	2	6	...
Buckland ... ..	...	...	..	...	...	...	...	1
Chudleigh	1	530 feet	new reservoir	12	22	15	20	...
Cockington ... ..	...	...	...	...	...	...	...	...
Coffinswell and Daecombe	...	...	...	...	...	...	...	3
Coombe and Haccombe ...	2	...	...	2	3	4 E.C.	3	3
Dawlish West ... ..	...	...	...	2	4	1	7	...
Denbury and Torbryan ...	1	...	...	5	7	7 E.C.	5	...
Hennock	1	...	Parish pump repaired	3	20	1	14	1
Ideford ... ..	...	...	...	...	...	...	...	1
Ilington	4	...	...	1	1	...	...	...
Ipplepen ... ..	...	...	...	3	3	3	1	...
Kingskerswell	7	1900 feet	700 feet new main	3	9	7	1	4
Kingsteignton	22	...	...	17	32	33	39	...
Lustleigh	4	200 feet	new public supply	5	8	6	8	1
Manaton	3	...	...	...	...	...	...	...
Moretonhampstead	3	new scheme	200 feet new main	4	4	3	1	2
North Bovey ... ..	...	...	...	...	...	...	...	2
Ogwell ... ..	...	...	...	1	1	...	2	...
Stoke	1	...	...	...	...	...	...	1
Teigngrace ... ..	...	...	...	2	7	4 E.C.	...	...
Trusham ... ..	...	...	...	...	...	...	...	...
Widecombe	1	...	...	...	...	...	...	...
Woodland ... ..	...	...	...	2	3	3	1	...
Total.....	70	3380 feet	2100 feet	75	145	116 and 16 E.C.	121	27

compared with 2,700 in 1903, independent of the Moreton scheme. Water mains have been extended in the different parishes for a distance of 2,100 feet (the figure in 1903 was 1,510), independent of new schemes at Lustleigh, Bovey, and Abbotskerswell. 70 new houses were erected, shewing that there is a good deal of building activity in the locality.

The following is a list of the more important public works completed in 1904, or contemplated in the immediate future, which necessitate an application to the Local Government Board for a loan :—

Abbotskerswell—Public water supply provided.

Bovey Tracey—New reservoir and mains to Brookfield and Wreyland completed, and new sewerage scheme under consideration.

Chudleigh—New reservoir built.

Dawlish West—Water scheme under consideration.

Hennock—Chudleigh Knighton : public water supply to be provided.

Ilsington—Comprehensive water scheme under discussion.

Ideford—New reservoir and renewal of mains contemplated.

Ipplepen—Paignton water to be introduced.

Kingsteignton—New reservoir in hand.

Lustleigh—Public water supply provided.

Moreton—New sewerage scheme completed.

Thus two parishes have been provided with a water supply and one with a sewerage system.

With regard to the private work, owners called upon to carry out sanitary improvements are becoming more and more anxious to consult the officers as to the most efficient appliances and method of doing the work. As there are from time to time exceptions to this rule, builders entrusted with the work are reminded of the regulation that notice of new drainage work is to be given to the Sanitary Inspector that it may be tested before being covered up—a proceeding to the interest of owner, builder, and tenant alike ; it may be added that the officers are always glad to meet owners or their agents on the spot to advise as to drainage work, &c.

With new sewerage and water supplies thus coming under the control of the Authority, in addition to the current private sanitary improvements constantly proceeding, the work of the Sanitary Inspector is continually increasing ; no less than 78 Sanitary Committee meetings (parochial) were attended by Mr. Rogers during the past year, chiefly in the evening ; an appreciable addition to the ordinary daily routine.

The assistant's time is largely taken up in testing drains, often 4 or 5 journeys being necessary on one system; he carries out disinfection of premises after infectious disease. I append his report on the Workshops in the district, the inspection of which, with Dairies and Slaughterhouses, are also part of his duties :—

Report on the Factories, Workshops and Bakehouses in the Newton Abbot Rural District for the year 1904

I have inspected the whole of the above as contained in the list sent by the Factory Inspector from Plymouth; also others not mentioned thereon.

My inspection includes : - Builders, 8; Wheelwrights, 4; Coach-builders, 2; Laundries, 14; Milliners, 5; Tailors, 5; Plumbers, 3; Saddlers, 5; Smithies, 6; Bakehouses, 24, making a total of 76.

In no case were outworkers employed, and only exceptionally are people worked overtime. I found an abstract of the Factory and Workshops Act fixed in all premises visited by the Factory Inspector.

Below is a summary of the general condition of the several premises :—

BUILDERS.

The workshops are mostly situated in the yard, containing a ground and first floor, the latter being approached by a wood staircase from the outside; few have their approach from the inside. All the rooms are large enough for present number of workers. Light and ventilation satisfactory; sanitary condition good, and all were limewashed periodically.

WHEELWRIGHTS AND COACHBUILDERS.

These workshops are exceptionally large, well ventilated and with plenty of light; sanitary condition satisfactory.

LAUNDRIES.

This work is carried on in a small scale, considering the area of the district. There are a very few that come up to the standard regarding the floor drainage, although some have been attended to through notices being served on the respective owners. In some of the parishes the laundries are in good condition with regard to light, ventilation, and drainage, but at Bishopsteignton there are old cottages turned into laundries, the floors of same being broken and defective, causing the dampness to continue longer than it would if there were good floors. Should notices be served on the owners respecting same, they would be closed rather than lay out any money on them. All are clean and periodically limewashed.

MILLINERS AND TAILORS.

Generally speaking, these workrooms occupy one of the rooms in the house or a place erected at the back. The rooms are well lighted and ventilated and limewashed, or if of wood structure, stained and varnished. In no case was overcrowding found; safe exit in case of fire is also provided. All have necessary conveniences for the workers. Notices have been served on the owners with regard to sanitary work, which have been complied with.

PLUMBERS.

These are only three in number, the drainage, ventilation, and light of same are good.

SADDLERS.

There are four workplaces for these, being one more than in the preceding year, the condition of same being generally satisfactory

SMITHIES.

These workshops, with one or two exceptions, are fairly large. There has been a new one built where the owner works alone. All are well lighted, ventilated, and sanitary accommodation, considering the trade, is good.

BAKEHOUSES.

The objections still exist as regard the situation of the bakehouse in the houses in some parts of the district, e.g., the back kitchen being used or a direct entrance into a living room. Only two bakehouses out of the 24 are below the ground level ; these are constructed fairly well.

The majority of the premises are clean, well ventilated, and lighted with good sanitary accommodation.

In addition, I have, by orders of the Medical Officer of Health, fumigated about 26 rooms in the different parishes, and applied test to the drains of about 130 houses ; also destroyed one lot of bedding.

R. J. ROWDON.



II.—NEWTON ABBOT URBAN.

PHYSICAL CHARACTERS. The bulk of the town is situated in the level basin of the Lemon, which debouches on to the Teign valley ; some of the lower houses stand on the alluvial soil adjacent to the delta of these rivers. This valley is surrounded by hills from 200 to 300 feet high, on which numerous villa residences are advantageously placed. Of late years the town proper has been gradually extending on the lower slopes of the hills. The main streets are as a rule wide ; there are comparatively few cross streets connecting them. In the older parts of the town some of the intervening spaces are occupied by courts—22 in all, containing from 1 to 18 houses ; these are, however, slowly going out of occupation. The geological formation of the hills on the Wolborough or southern part of the district is greensand, gravels, and clays ; while in the Highweek or northern parish, shales predominate.

The district comprises the parishes of Wolborough, Highweek, and Milber (the latter being a portion detached from Coombe in 1901), a total area of 4,132 acres ; the estimated population for the year under review is 12,950. At the last census there were 2,704 inhabited houses—4·6 persons per house.

VITAL STATISTICS. The number of deaths registered during 1904 was 201, of which 102 were in males and 99 in females, equal to an annual rate of 15·5 per 1,000. As in the case of the Rural district this coincides with the average death rate for the previous ten years ; it is a fraction higher than the figure for 1903. Of the above deaths, no less than 26 were in the Union house in persons belonging to the district ; if these are excluded, the rate is reduced to 13·5.

The deaths in the four quarters of the year were 56, 58, 50, and 37, giving rates of 17·5, 18·1, 15·6, and 11·6 per 1,000 per annum respectively ; the first two quarters thus showed the highest mortality, while August, April and February were the most fatal months ; in the first of these 8 deaths from infantile diarrhœa were recorded.

CHIEF CAUSES OF FATALITY. Zymotic diseases, 11 deaths ; erysipelas, 1 ; influenza, 10 ; constitutional diseases, 54, of which 21 were due to cancer and 22 to phthisis ; diseases of the nervous system, 19 ; of the respiratory system,

26 ; of the circulatory system, 22 ; of the urinary system, 8 ; of the digestive system, 13 ; of the generative organs, 1 ; infantile debility, 6 ; premature birth, 8 ; old age, 19 ; and accident, 3. Cancer and phthisis with rates of 1·6 and 1·7 per 1,000 respectively have both, especially the latter, made a considerable advance on last year's figures. The cancer death rate greatly exceeds the average for the previous 10 years, which worked out at ·97 ; while that from phthisis for the same period was 1·2. The respiratory group has contributed a slightly increased mortality, while the deaths from heart disease have somewhat receded.

COMPARATIVE TABLE.

DEATHS FROM	1904.	Average of years 1894-1903	1903.	1902.	1901.	1900.	1899.
Small Pox ... ..	...	...	...	...	...	...	...
Measles ... ..	...	3·5	5	8	3	...	1
Scarlatina ... ..	...	2	...	...	...	...	...
Whooping Cough	2	3·8	...	1	10	1	4
Diphtheria ... ..	...	6	...	...	2	...	1
Continued Fevers (Typhoid, &c) ... ..	...	2·2	2	3	4	1	...
Diarrhœa	9	3·7	2	8	4	6	3
SEVEN CHIEF ZYMOTICS :	11	14	9	20	23	8	9
Phthisis	22	12	13	25	10	12	6
Other Tubercular Diseases	5	4·5	6	5	4	6	2
Bronchitis, Pneumonia, Pleurisy	25	21	22	18	27	32	14
Heart Diseases	22	14	26	20	8	14	7
Cancer	21	10	16	10	17	7	8
Violence	3	4·5	6	4	9	4	2
All other Diseases	92	80	92	90	80	80	84
Total deaths	201	160	190	192	178	163	132
Estimated Population	12950	10307	12800	12650	12518	9600	9500
General Death Rate	15·5	15·5	14·8	15·2	14·2	17·0	13·9
Zymotic Death Rate	·85	1·4	·70	1·6	1·8	·83	·95
Total Births	297	255	315	279	284	223	239
Birth Rate	22·9	24·7	24·	22·1	22·7	23·2	25·2
Deaths under 1 year	34	33	33	38	39	34	24
„ between 1 and 5 years	10	13	15	7	13	10	15
„ over 65 years	74	49	68	61	53	45	42
„ under 1 year to 1000 bths.	114	129	105	136	137	152	100
Deaths in Union House	81	54	65	64	54	55	64
Deaths in Union House belong- ing to District	26	11	17	12	7	15	15

In comparing the actual number of births and deaths in 1904, with those of former years, it is to be noted that the total population of the district was considerably increased in 1901 by the inclusion of the parish of Highweek.

AGE INCIDENCE. Under the age of 1 year there were 34 deaths ; between 1 and 5 years, 10 ; between 5 and 15 years, 2 ; between 15 and 25 years, 12 ; between 25 and 65 years, 69 ; and over the latter age, 74. Thus the percentage of deaths under 1 year was 16·9 ; and of those over 65 years, 36·8 ; both these are slight improvements on the figures for 1903, which were 17·4 and 35·8 respectively.

THE INFANTILE MORTALITY, or deaths under 1 year to every 1,000 births, was 114 ; as compared with 105 in 1903 and 129 for the preceding 10 years ; premature birth (8 deaths) and bowel disorders (16) were the chief factors. I have, as usual, made investigations on this subject, with results as follows :—Of the total 34 deaths of infants under 1 year of age, 32 or 94 per cent. belonged to the working classes ; while in 22 cases (or 65 per cent.) the father was earning under £1 a week, or in uncertain employment. In 24 or (omitting 8 premature births) 92 per cent. the children were either wholly or partially brought up by hand, and of the 16 deaths from disorders of the digestive system, the whole were bottle fed. The courts were responsible for 5 fatalities, equal to a rate of 9·1 per 1,000, as against 2·6 for the whole area. 22 of the deaths were in houses on the lower levels, and 20 in the older dwellings ; in only one case were any insanitary conditions present, except that in four instances cistern water was used. Five of these children were illegitimate, while 11 were first born.

Chief causes of mortality were : whooping cough, 1 death ; premature birth, 8 ; diseases of the digestive system, 16, of which 9 were due to diarrhœa ; of the respiratory system, 2, of which 1 was tubercular ; debility, 6 ; and syphilis, 1. There were no infantile deaths in the Union House in 1904. I append a table showing these figures in comparison with the two previous years.

YEAR	Total Infant deaths excluding Union House.	Working Classes.	Under £1 a week or uncertain employment.	Hand fed.	DEATHS FROM.						
					Digestive System.		Respiratory system.	Debility.	Premature Birth.	Illegitimate.	In Union House.
					Total.	Hand fed.					
1902	38	34	19	20	15	12	4	6	6	1	7
1903	31	29	22	17	8	7	3	3	5	6	8
1904	34	32	22	24	16	16	2	6	8	5	...

It will be seen that the great prepondence of deaths is among the working classes and also that nearly the

whole of the fatalities from digestive disorders was accompanied by hand feeding. In 1904 nearly half the mortality was due to bowel complaints; there were 9 deaths from diarrhœa—all but one in the month of August—which was epidemic to a certain extent. All these were bottle fed, and in many of them the objectionable rubber tube was in use. Of all the diseases to which infant life is subject this is one of the most preventible, being generally due to improper feeding of one kind or other. With the hope, therefore, of diffusing a little knowledge on the subject, I have written out a few directions for the rearing of infants; these are printed on a stiff card, and will be distributed by the registrar when births are recorded. The object aimed at is to present the most important points in the simplest possible form, and to avoid a mass of details, which are only likely to create confusion among the class it is desired to reach; I reproduce this below.

HOW TO BRING UP BABIES.

Many deaths in young children are due to improper feeding.

Mothers should always nurse their infants unless forbidden by the doctor.

Use bottles with nipples only and no tubes; it is well to have two, the one not in use to be kept steeping in water. Milk turns sour in dirty bottles, causing diarrhœa.

Heat the milk to simmering, not to boiling, point.

Give nothing but milk, with a little sugar and a pinch of salt, at first; but when dribbling at the mouth begins freely, rolled biscuit or crust may be gradually added.

Keep the milk covered in a cool place; buy fresh twice a day.

Diarrhœa is common in hot weather, therefore be specially careful in summer: never neglect diarrhœa in a young child.

Clothe your child warmly, but let it have plenty of fresh air and sunshine; wash in warm water daily.

Observe strict cleanliness with regard to food—especially the bottle with its nipple—clothes and bedding: open windows frequently. Let the child have a cot of its own.

The births of 147 boys and 150 girls give an annual rate of 22·9 per 1,000; this is somewhat below the 10 years average, but is a fraction higher than the 1902 rate, which was the lowest recorded. The births for the four quarters of the year numbered 68, 80, 76, and 73, giving rates of 21·2, 25·0, 23·7, and 22·8 per 1,000 per annum respectively. The natural increase, or excess of births over deaths, including the mortality in the Union House, was 96, as against 125 in 1903, and 87 in 1902.

In the Union House, which is situated in this district, there were 81 deaths, of which 50 were in males and 31 in females; 52 were 65 years of age and upwards and of these 19 were assigned to old age. Their local distribution is as

follows :—Newton Urban, 26 deaths ; Newton Rural, 17 ; Dawlish Urban, 1 ; Ashburton, 1 ; Teignmouth, 8 ; and Torquay, 28.

The above figures are moderately satisfactory ; the general death rate, as before noted, coincides with that for the previous ten years ; the zymotic rate is below the average, and deaths from the more serious type of these diseases are altogether absent, while the infant mortality, though not so good as last year's figure, is still well below the normal.

The birth rate has, however, again declined.

ZYMOTIC DISEASES. From the 7 ordinary zymotics 11 deaths were registered, 9 being due to diarrhœa, and 2 to whooping cough, giving a rate of .85 per 1,000, as compared with .70 in 1903 and an average of 1.4 for the preceding 10 years. The deaths from diarrhœa were all in children, under 1 year of age, as was also one of the fatalities from whooping cough.

The notifications of disease were 33 in number, of which 8 were scarlatina, 4 diphtheria, 6 typhoid fever, 2 puerperal fever, and 13 erysipelas. Appended is a table shewing the monthly incidence :—

DISEASE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Small Pox
Scarlatina	1	...	...	...	4	...	3	8
Diphtheria	2	2	4
Typhoid Fever	1	...	...	...	...	1	2	2	...	...	...	6
Erysipelas	1	...	4	1	...	2	3	...	...	2	13
Puerperal Fever	1	...	...	...	1	...	...	...	2
Cholera
Total.....	...	1	1	...	5	2	1	4	6	4	2	7	33

WHOOPING COUGH was epidemic to a certain extent in the early spring months, causing 2 fatalities. This disease has during the past year been generally prevalent in the surrounding district.

TYPHOID FEVER. There were 6 notifications of this disease, as compared with 16 in 1903 and 15 in 1902—a considerable drop ; 5 of them were in the late summer months. Only one of these was in association with drainage defects ; in this instance a defective ventshaft was found in the party wall, though there was no indoor closet—a somewhat singular construction. Two other attacks were associated with the consumption of shellfish from doubtful waters—a practice

which does not seem to diminish in spite of repeated warnings. It is true that out of many hundreds who occasionally or habitually do so, only one or two contract disease; it is probable that the amount of cooking which they get is sufficient to sterilize them in most cases; but nevertheless the risk is always present. A house in Osborne Street provided two cases in young children; the origin of the first was obscure, though there was some history of paddling in the river; the other was probably the result of infection; the remaining attack—also in a child—presented no very obvious cause.

Four of the above were removed to hospital forthwith; one was unfit for removal, but the house was cleared and a nurse provided by the Guardians for the time, though this patient went to hospital later on; the other was sufficiently isolated at home.

One case was between the ages of 1 and 5; two between 5 and 15; one between 15 and 25; one over 50; and one over 70. All made good recoveries—an exceptional result at the latter advanced age.

DIPHTHERIA. There were 4 notifications of this disease, without fatality, during the last two months of the year. These were accompanied by a few cases of sore throat among the children in Highweek, but without any general epidemic; the sore throats were not confined to any one of the three elementary schools in this parish.

Three diphtheria attacks were in children between the ages of 5 and 15 years; the fourth was in an adult in one of the infected houses. In no case were insanitary conditions found. Two of the above were treated in the hospital.

The type of disease was unusually mild, though in one or two instances marked paralytic symptoms supervened later on.

SCARLATINA. Eight notifications; in two instances a second attack developed in the same house, while the other four were isolated cases. One was an infant of $1\frac{1}{2}$ years, while two others were under 5. Three were between the ages of 5 and 15, while two were just over 15. Five of these patients were removed to hospital. Considering that of late years several of the larger towns in the neighbourhood have undergone epidemics, Newton has been notably free from this disease.

THE ISOLATION HOSPITAL is situated on the Totnes road, about a mile from the centre of the town. Sixteen parishes are associated with the hospital combination, viz: Wolborough and Highweek (Newton Urban District), Abbotskerswell, Bishopsteignton, Bovey Tracey, Chudleigh, Cockington, Coffinswell and Dacombe, Coombe and Haccombe,

Hennock, Ipplepen, Kingskerswell, Kingsteignton, Ogwell, Teigngrace, and Torbryan and Denbury. Bishopsteignton was added during the past year. Eight patients can be accommodated in the typhoid fever wards, while the iron buildings contain 12 beds and are used for scarlatina cases. There is an administrative block ; also a steam disinfecter and mortuary. I give the following extracts from the annual report of Dr. J. W. Ley, the Medical Superintendent :—

During the year ending December 31st, 1904. nineteen cases have been treated in the Joint Isolation Hospital, viz. :—Typhoid fever, 7 ; diphtheria, 6 ; scarlet fever, 6.

One case of typhoid died and all the other cases were discharged convalescent.

The majority of the cases have been of a mild description.

J. W. LEY, Med. Sup.

February 3rd, 1905.

PHTHISIS caused 22 fatalities, as compared with 13 in 1903 and 25 in 1902 ; three of these were in the Union House in persons belonging to the district. There were 5 deaths between the ages of 15 and 25 ; 9 between 25 and 35 ; 4 between 35 and 45 ; 2 between 45 and 55 ; and 2 between 55 and 65. The duration of illness varied between 2 months and 4 years. This is a considerable mortality, but one at least was a visitor, and probably others also come under that category. The disease, however, has been generally on the decrease for many years with the better housing and feeding of the people ; and it is in this direction that still further improvement should be sought.

The sick room is disinfected by the authority after death, except where objected to—which is seldom.

DISINFECTION. Houses are limewashed and disinfected by the authority where necessary ; clothes and bedding are dealt with by the steam disinfecter at the hospital. The Lingner apparatus for the aërial disinfection of rooms continues to work well.

SANITARY CONDITIONS & PROCEDURE.

THE WATER SUPPLY is that of Torquay in the vast majority of the houses, and is good and abundant. There are, however, some wells in the rural part of the district ; also two or three springs which arise in the Wolborough hill are still used.

SEWERAGE. Water closets are general ; the trunk sewers are of masonry and are brought to one outfall in the marshes, where there are settling tanks, the effluent from which dis

charges into the estuary of the Teign. Comparatively little work was done during the past year in the direction of renewing old and defective sewers, but a new sewer has been laid at the back of Quay Terrace to take the drainage of 14 houses ; a portion of stone sewer which passed under a house in Queen Street has been replaced by piping, and the sewer at the back of Buckland View Terrace and Salisbury Road has been relaid. At the end of the year a start was made on the reconstruction of the Exeter Road sewer—a very necessary work. The outfalls of several combined drains in Highweek have been taken over by the Authority for purposes of management ; this is a progressive step, and will do much to obviate nuisance. The village of Highweek, which does not at present seem to attract building enterprise, is perhaps hardly ripe for any general sewerage scheme, which must of necessity entail great expense ; in the meantime there is sufficient irrigation area available for treatment of the sewage if properly looked after.

SCAVENGING. House refuse is removed three times a week in the more densely populated parts of the town and twice a week in the outskirts. Increasing difficulty seems to be found in disposing of this refuse from the depot in the marshes, where the heap is assuming large proportions ; sooner or later a destructor will probably be necessary, in the absence of any other outlet, such as reclaiming part of the marsh. I have, however, had no complaints of any nuisance arising.

DAIRIES, COWSHEDS, &c. These have been inspected from time to time by Mr. Judd and myself and generally found satisfactory. A list is kept of cowkeepers and dairymen, with external source of milk (if any).

SLAUGHTERHOUSES. There are one public and three private slaughterhouses in the town ; I had some complaints concerning the former ; this is now looked after and cleaned by the Council's men—resulting in great improvement. I have also visited (with Mr. Judd) all the workshops on the list ; details are given in the special report.

SANITATION AND EDUCATION.

The system of compulsory education—now of many years standing in this country—has, with the trend of recent legislation, arrived at a point at which the state becomes directly responsible for the early training of the vast majority of its citizens ; and with that increasing responsibility public interest on the subject, just at present stirred too by the cry of degeneration, is everywhere manifesting itself. Now the

object of education in general is both national and individual ; national in the sense that the prosperity of a race is dependent alike on its physical and its intellectual development ; individual, in that the ideal result is to send each child out into the world not only equipped to the best advantage for the competition of life, but to ensure that he shall become what is called a useful citizen ; or in other words that the moral, intellectual, and physical assets of each unit shall be exploited to the best advantage. This process usually involves more than one stage. the first or elementary, with which alone we are now concerned, being a groundwork of general knowledge valuable partly for the sake of the facts acquired, and partly also for the discipline by which the process of learning them is accompanied.

When, however, the children are perforce gathered into the state educational net, certain considerations of sanitary importance at once present themselves, which require attention, not only that the best results may be obtained and the most made of the material in hand, but also to avoid waste of the public resources. Among these are—the age at which school life is to begin ; the physical and mental fitness of the child to be educated ; instruction in hygiene and kindred subjects.

Under the present state of the law, school attendance is compulsory between the ages of 5 and 14 (with certain exceptions) ; but children are received at the infant schools at an earlier age, since mothers find that young children are troublesome at home and are, therefore, glad to be relieved of them in this way, as soon as they are able to walk to school. Thus the infant schools for children up to a certain age are apt to degenerate into nurseries, requiring teachers not so much to educate, as to keep them quiet and amuse them. It does not appear that anything is ultimately gained by forcing mental effort at these early ages, but many authorities agree that it is rather harmful than otherwise ; moreover, very young children are huddled together in crowded schoolrooms for several hours daily, at a period when all their vitality should be expended in the lines of physical development, with the help of as much fresh air and sunshine as they can possibly get. Besides this, schools exist more for purposes of education than to relieve parents of responsibility for the general upbringing of their offspring. I think, therefore, that five is the earliest limit at which children should be collected for educational purposes.

Of the first importance is the mental and physical condition of the child to be educated—indeed it may be said that education can only be useful in so far as the child is fit to receive it. It is well known that a certain percentage of the children are in one way or another defective, and unable, therefore—to a greater or less extent—to profit fully, or even

Table shewing various statistics in connection with the
Elementary Schools in the combined districts.

PARISHES.	No. of Schools.	No. of children.	Deficiencies.								No. who have to go.	
			Eyesight		Hearing.	Others physical.	Mental.	Total defective.	Per centage.	Insufficiently fed or clothed.	2-3 miles.	Over 3 miles.
			Number.	percentage								
Highweek	3	543	18	3·3	15	7	9	31	5·7	13	10	...
Wolborough	5	1549	40	2·6	17	9	10	76	4·9	9	5	...
Total Newton Urban	8	2092	58	2·8	32	16	19	107	5·1	22	15	...
Dawlish Urban.....	3	585	30	5·1	16	5	6	54	9·2	2	10	2
Abbotskerswell.....	1	87	2	2·3	...	1	1	4	4·6	3	2	...
Bickington.....	1	51	2	3·9	...	...	...	2	3·9	...	2	...
Bishopsteignton	2	160	4	2·5	..	...	1	5	3·1	...	3	...
Bovey Tracey	3	383	8	2·1	1	...	5	14	3·7	...	9	7
Broadhempston.....	1	96	1	1·0	...	1	1	3	3·1	...	11	2
Chudleigh	2	309	10	3·2	2	1	1	13	4·2	...	17	1
Cockington	1	59	1	1·7	1	...	..	2	3·4	...	2	...
Coffinswell.....	1	33	1	3·0	...	...	...	1	3·0	...	...	...
Coombe	1	55	1	1·8	...	...	...	1	1·8	...	2	...
Dawlish West	1	74	2	2·7	...	...	...	2	2·7	...	...	...
Denbury	1	78	...	...	4	2	...	6	7·7	...	10	...
Hennock.....	2	186	2	1·1	3	1	3	9	4·8	...	9	...
Ideford	1	58	3	5·2	...	...	...	3	5·2	...	14	...
Ilsington.....	2	178	9	5·1	...	...	2	11	6·2	...	27	...
Ipplepen	1	152	3	2·0	3	2	...	7	4·6	...	...	...
Kingskerswell	1	182	4	2·2	3	...	2	9	4·9	1	...	...
Kingsteignton	2	453	3	·7	3	1	4	11	2·4	...	7	...
Lustleigh	1	117	4	3·4	...	...	3	7	5·1	...	20	21
Manaton.....	1	58	...	...	...	...	...	...	...	...	5	...
Moreton	2	270	4	1·5	2	1	...	7	2·6	4	66	...
North Bovey.....	1	72	2	2·8	1	...	...	3	4·2	...	23	2
Ogwell.....	1	53	3	5·6	5	...	...	7	13·2	...	5	...
Stoke	1	92	2	2·2	...	...	...	2	2·2	...	1	...
Teigngrace.....	1	44	2	4·5	...	1	...	3	6·8	...	...	...
Trusham.....	1	41	3	7·3	...	1	1	4	9·7	...	...	...
Widecombe	2	120	2	1·7	1	1	2	6	5·0	...	19	6
Total Newton Rural	35	3461	78	2·3	29	13	26	142	4·1	8	254	39
Grand Total	46	6138	166	2·7	77	34	51	303	4·9	32	279	41

without detriment, by the instruction available. With a view to giving a rough estimate of this proportion in the combined districts, I have obtained from the head teachers a list of the children obviously defective as to (I) sight, that is to say those wearing glasses, or who have to be brought close up to the blackboard; also those with marked squint, (II.) hearing (III.) any other physical defect, such as club foot, marked spinal curvature, or other permanent lesion, (IV.) pronounced mental defect—not including those merely dull or stupid. These figures are the result of enquiry from 46 schools, accommodating 6,138 children. To this total Newton Urban contributes 8 schools with 2,092 children; Dawlish, 3 schools with 585 children; and the Rural parishes, 35 schools with 3,461 children. It will be seen that defects of eyesight amounted to 2·8 per cent. of the total in Newton Urban, 5·1 in Dawlish, and 2·3 in the Rural—averaging 2·7. Defects of hearing existed to the extent of 1·5 per cent. in Newton, 2·7 in Dawlish, and ·80 in the Rural—average 1·3. Other physical defects, ·76 in Newton, 1·0 in Dawlish, and ·38 in the Rural—average ·55. Mental deficiency worked out at ·91 in Newton Urban, 1·0 in Dawlish, and ·75 in the Rural, with a mean of ·83. The total percentage of defective children:—Newton Urban, 5·1; Dawlish, 9·2; Newton Rural, 4·1; averaging 4·9 over the whole. It is of interest to note that the same order is kept under all the above headings, Dawlish shewing the highest percentage of deficiencies, while the Rural parishes give the most favourable figures, Newton Urban occupying the middle position. In the case of Dawlish, however, this may be discounted to some extent by the fact that the numbers dealt with are smaller and, therefore, more liable to error. Now all these figures were obtained from the teachers alone, without any medical inspection or examination; hence only very obvious defects are included. Much depends on the observation of individual teachers—especially in the last item, where it is evident that the dividing line between what is merely dulness of intellect and actual mental deficiency is likely to be differently drawn by different observers. As far as the pronounced physical abnormalities are concerned, the other three are probably fairly accurate, and of course the masters and mistresses who are in daily contact for months and years with their children get to know these idiosyncrasies of sight and hearing. Further than this it is impossible to go without medical inspection and examination; it leaves untouched anæmic and general conditions of ill-health, incipient phthisis, weak hearts, and many minor conditions, all more or less amenable to treatment, but which may result later on in constitutions impaired by these early neglected ailments, possibly aggravated by the conditions of school life. Not only is it harmful to the individual to force into active mental and physical effort children whose defects will not allow them to

undergo the training imposed, much less to get the best advantage from it, but the time of teachers is wasted in the attempt. When for instance the eye or the ear is at fault, the knowledge which enters the brain by these channels is correspondingly hazy or faint and is less likely to be stored up in the memory—apart from the headaches and general malaisé which is often produced by the straining of these organs when impaired. Such children are accordingly classed in standards much below those which their age would warrant. Moreover, the young will often suffer in silence, and parents get to look on chronic colds, anæmia, and headaches, as natural—things which they will grow out of, considering them perhaps as slight ailments for which they cannot afford the expense of medical advice.

Closely allied with this question is that which deals with the sufficient feeding and clothing of the children, whose brain cells are called on for exertion at a period when the whole organism is in process of development, and during which the general constitution is more or less fragile and in need of every care. In this district, fortunately, the matter is not an urgent one; the appended table shows that only 5 per cent. could be said to be neglected as to either the one or the other—in contrast with larger centres of population where there is always a certain proportion of the community living on the verge of extreme poverty, and all that this implies. The latest proposal—recently made and adopted at a labor conference in London—is that the state feeding of all school children is a necessary corollary of universal and compulsory state education. This is, I think, much too sweeping a measure which would free parents, who could very well afford the expense, of all responsibility in this direction; moreover free clothing would seem logically to follow. The proposition of Dr. Macnarmara—a well known school authority—by which educational bodies should be empowered “to provide food for the children in attendance at schools, unfit through lack of proper nourishment to profit by the education offered, and also take such steps to recover the cost of the same from parents or guardians as may seem desirable” appears to be one which would go far to meet the difficulty. The cost no doubt would be considerable, but against this must be put the money wasted on attempting to educate such children, and also the resulting constitutional improvement of many, who might perhaps otherwise become a burden to the state later on. Further the preparation of such meals might very well be utilized as a means of teaching plain cooking to the older girls—a subject which will be alluded to later on.

In my opinion some system by which every child in a public elementary school is inspected medically once a term should be inaugurated; when necessary, parents should be advised if their child wants attention and also warned of the

dangers of neglect ; the object being to discover any abnormalities—to ward off where possible incipient disease and especially to remedy any conditions likely to interfere with education. With regard to school life, a classification would be more easily made in accordance with intelligence and capability of taking part in mental and physical exercise ; while those incapable of benefitting from education should be excluded. Further the vigorous in mind and body would have a freer scope for their energies in being unretarded by the presence of those less fortunate in these respects. At the same time, however, all possible provision should be made for the more feeble, who are still to some extent receptive, but cannot advance at the same rate as others of normal capacity. In the larger centres of population this does not present the difficulties engendered by rural parishes or small towns in which the schools are split up by denominational differences under the system now obtaining, but even in such cases much might be done. In schools where meals are provided, I think that to the medical inspector—in conjunction with the head teacher—the decision as to whether any individual child should be included in this provision, ought to be left ; and apart from the proper nourishment of normal children, many delicate little ones would derive much benefit from a glass of milk and a hunch of bread in the middle of the forenoon ; but in no case should a meal be given without the certificate of the school doctor.

Such a system of medical control and inspection might be begun gradually, with some regard to economy, but of its benefit to the community there can be little doubt. From a recent article in the "Journal of the Sanitary Institute," I gather that it has been adopted with successful results in many countries—America, France, Switzerland, Germany, and Japan, are specially mentioned ; indeed in the latter state, which has so recently been imbued with the spirit of western civilization—(with a population of about 45 millions) "8,434 school doctors are maintained, nearly every school and college in the country being under medical supervision, and a complete system of physiology, hygiene, and first aid is taught to pupils and teachers." Denmark, Belgium, Austria, Servia, Roumania, Columbia, the Argentine, Chili, Norway, are mentioned amongst others as having systems more or less complete. Even Turkey appears to be making progress in the same direction. So that at present England stands almost alone in leaving the question practically untouched.

Whether this ought to be controlled by the local authority is a matter of detail ; I do not see how the additional duties—very considerable, especially in large rural districts, could be imposed on the Medical Officer of Health, whose time is necessarily limited. I have made a small beginning in two of the Newton schools as regards eyesight, and with the co-

operation of the head-mistresses several children whose sight was markedly defective have been provided with glasses. The procedure was as follows : I got the teacher to show me those whom she thought wanted attention ; this being confirmed after a superficial examination, the parents were visited by the mistress and advised accordingly. Recommendations to the hospital were obtained in one or two instances, and glasses where necessary provided. It is gratifying to be able to state that in all cases I have found the teachers take a keen interest in their charges and eager to fall in with any suggestion or to take any trouble with the object of helping them. Parents were also both willing to act on my advice and grateful for the assistance afforded. I propose to take other schools in rotation as opportunity offers.

In the more sparsely populated parishes such as comprise most of the Newton Rural District, the distance to be daily traversed by children is often considerable and exercises an adverse influence to a certain extent. In 26 parishes (the other two having no school) there are 293 children who have over 2 miles to go, 39 of whom live 3 miles or more distant—nearly 9 per cent. of the total number. In the Moreton district 66 out of 270—24 per cent.—are outside the 2 mile radius ; while at North Bovey 25 out of 72—nearly 35 per cent., and Lustleigh 41 out of 117, or 35·0 per cent. come within this category. This is unavoidable from the nature of things, but for the very young or delicate an extra strain is imposed. As far as I can discover, the children in these localities are fairly well clad and sufficiently fed—factors which go a long way to modify the hardships of distance, yet even so on many the strain must be pronounced ; and in exposed moorland districts such as these, with their constant vicissitudes of weather and temperature, there are many days on which the health of those who go, or the education of those who stay at home, is likely to suffer. The only remedy for this has been applied at Buckland, and I believe other places outside the district, where a conveyance is provided to take the children to school, but this—though it might with advantage be extended—is at present found too costly to be adopted in more than a few extreme cases. In this connection a periodical medical inspection would determine which children were likely to be prejudiciously affected by the journey and would to some extent simplify the duty of the attendance officer.

Turning to the course of instruction, the teaching of hygiene and kindred subjects has, in common with medical inspection and control, received much attention of late—especially during the last few months, and it seems to be agreed on all sides that the instruction of children in the best way to lead healthy lives should be compulsory in all elementary schools. According to the present code there are 9

subjects which are obligatory, viz. : (i) the **E**nglish language, (ii) arithmetic, (iii) knowledge of common subjects, (iv) geography, (v) history, (vi) drawing, (vii) singing, (viii) physical exercises, and (ix) plain needlework for girls. Then comes a further list of subjects which may be taught (article iv) "where adequate equipment and efficient teachers are available" :—for boys, handicraft, gardening, and cookery (in seaport towns) ; for girls, cookery, laundry work, dairy work, and household management, special grants being made in these cases. In the following article it is provided that any useful subject may be taught under certain conditions. Hygiene can thus be included, but it is not obligatory, and is not even mentioned by name. In the schools in these districts, the number in which this subject is systematically taught amounts to about half-a-dozen, though in several others some sort of instruction is given indirectly in the form of object lessons. The healthy management of the body and the dwelling house is too important to be passed over in this manner ; one has only to go into the poorer quarters of any town—or for that matter, many a country cottage, to perceive how much benefit even a little elementary knowledge of hygiene would confer. It is possible that many of the present generation, if transplanted forthwith from the alleys and courts of our large towns to better surroundings, would soon reduce these to little better than slums—these lessons are not learnt later on in life—indeed there is no further opportunity ; it is the children we can get hold of during their school days—in the impressionable time of life—and it is to them we look for improvement in the future generation. Moreover, seeing that the foundations of many diseases are laid in childhood, the school age is none too soon to begin that care of the body which will go far to ensure a vigorous and healthy life. What is needed is a mere outline of sanitary instruction ; elementary physiology forms the basis ; the object and position of the more important organs, with especial reference to the care of the teeth, pointing out the digestive troubles which early loss of these, now increasingly common, is likely to promote—one authority recommends that a "tooth cleaning drill" should be instituted—the dangers of tight clothing and unsuitable foot gear. With regard to the management of the dwelling, the value of fresh air at all times, especially in bedrooms, where one third of the 24 hours is passed—the causes of vitiation of air and dangers thereof ; how to ventilate rooms properly ; the necessity for pure water should be insisted on, and the dangers of indulgence in alcohol (and tobacco at early ages), fully pointed out.

For girls still more is needed ; the great majority of the pupils do not belong to the servant keeping classes, and when they become wives and mothers, will not only have to manage their households, but do all the cookery and other work of the family. All, therefore, that comes under the head of domestic

economy ; the way in which a certain weekly sum may be laid out to the best advantage ; to get the best nutritive value out of food for money spent, with a knowledge of the various food materials and their use in the nourishment of the body and especially the importance of the fats and nitrogenous constituents, with a due regard to variation in diet—are all of the first importance ; clothing too warrants some attention. Even more necessary is a knowledge of plain cookery (which should include simple sick room necessities)—not of a scientific kind, but the practical cooking of a cottager ; on this depends to a great extent the health and comfort of the family. Badly cooked meals mean indigestion and insufficient nourishment, and perhaps a resort to alcohol—which is not a food—with all its evils, to supply the deficiency ; apart from the waste in material and money involved. When a girl leaves school—as the majority do—without this knowledge, she is not in my opinion properly equipped for the duties of life. Those who go into domestic service generally acquire it to some extent ; but the rest—a large proportion—can only pick it up in a haphazard fashion.

Last, but not least, seeing how many young children are annually lost owing to improper feeding—indicating the prevalence of much ignorance on the subject—a course of instruction in the rearing of infants should be given to the older girls, including the common dangers to child life and how to avoid them. That these are mostly preventible deaths is shown by the fact that the mortality among the more wealthy classes is relatively extremely small. Poverty may in some cases be the direct cause—and this will be always in operation—but want of knowledge can be remedied, and the school which professes to educate is the institution to supply this.

Physical exercises are now universal and, therefore, only warrant a passing remark ; but more provision might be made for those who are unable from physical deformity or constitutional defect to take part with the healthy children. I am also inclined to think that the inclusion of organised games, because of the interest excited and the mental stimulus of competition involved, would be found of equal, and perhaps, more value, than the usual set mechanical drills ; given a good playground, there is room for both.

Now all the above are subjects of practical utility, knowledge of which, and intelligent action resulting on that knowledge—for if knowledge is not applied, then education is a failure—is calculated to increase the physical efficiency of the race, now, we are told, in jeopardy, and as a further consequence the intellectual capacity also. No doubt, in order to deal with this branch of education, some of the present curriculum would have to be sacrificed, especially as far as the girls are concerned, unless it was found possible to keep them another year at

school. Some difficulty is likely to be encountered in the teaching of cookery, but where meals are provided for the children, the preparation of these might be utilized for purposes of instruction ; in centres, as at Newton, where cookery classes, in connection with the Technical Schools, are likely to be established, there is still better opportunity. All, however, should be obligatory and provision made accordingly, both in apparatus and qualified teachers ; at present they are largely dependent on circumstance, and hence are neglected ; at the same time there are indications that the spirit of reform is abroad, from which much may be expected. I would suggest that during the last two years of school life special prominence should be given to the subjects above indicated, and other matters, as far instance drawing, geography, and history, which are in comparison luxuries, sacrificed to some extent. It is impossible to teach more than a certain amount in the limited time at disposal, and the education given by elementary schools should mainly concern that which appeals to the useful rather than to the ornamental side of life.

In conclusion, I wish to thank the head-teachers of the schools in the combined districts, who supplied me with the information on which the appended table is compiled.

HOUSING OF THE WORKING CLASSES. Two houses were condemned, both in the courts, and closing orders obtained ; 24 have been demolished. No cases of overcrowding have come under notice.

Building operations have been somewhat slack, but plans for 80 new houses were passed during the past year ; this includes 54 semi-detached dwellings which are to be erected in a meadow at the back of Queen Street ; these will form a new street—to be known as King Street. That this type of house should be built in what is practically the centre of the town, I look on as a great advance. Further development is still proceeding on the Abbotsbury Estate, at Decoy, and also South Road, Wolborough Hill. Besides the above, plans of 11 shops and 1 large bakery were approved. All this shews that the town continues to prosper. The Free Library and Technical Schools were opened in the summer ; these constitute a handsome block of buildings.

Steady progress still continues to be made in the reconstruction of old drainage systems, flushing of closets, and other private sanitary improvements, the details of which are given in Mr. Judd's report. The parish of Highweek has received a good deal of attention during the past year—including several isolated cottages in the country. The amount of work overtaken is evidence of the sanitary activity displayed in the district.

MR. LEWIS STEVENS, Surveyor, reports as follows :—

Report of sanitary work in connection with the relaying of sewers and plans submitted for the year ending 31st December, 1904.

The work carried out the past year has been light compared with previous years and comprises the following :—

SEWER AT THE REAR OF BUCKLAND VIEW TERRACE AND SALISBURY ROAD.

This has been relaid the entire length under the Back Road. The additional fall obtained will now make the sewer self-cleansing. In carrying out the work 92 ft. lineal of 7" sk pipe and junctions were used in addition to portions of the old pipes.

No. 149, QUEEN STREET.

The stone sewer that formerly passed under these premises has been taken out entirely and replaced with 90 ft. lineal of 21-inch sk pipe, which was laid, bedded on, and encased in cement concrete. The drains of the house under which it passed, and the adjoining three houses which formerly connected under the house, have been relaid outside ; this involved the laying of about 80 ft. lineal of 6 and 4" pipes with the requisite junctions and bends.

QUAY TERRACE.

A new pipe sewer has been laid at the back of No. 6 to 19 inclusive, and the branch drains from these houses have also been relaid and connected to the new sewer, the connections to the main artery under the houses having been carefully disconnected and any portion left under the floors filled in with hot slacked lime poured in a liquid state. The work carried out by the Council involved the laying of 176 ft. lineal of 7-inch, 108 ft. of 6-inch, and 142 ft. of 4-inch sk pipes, with the requisite y junctions and bends.

FERN TERRACE.

At these premises the drainage system has been relaid. A main branch has been carried up under the bed of the Lemon, by which the branches are taken out without being under the houses. In this work the laying of 64 ft. lineal of 4" and 24 ft. of 3" sk pipe was carried out with the necessary junctions and bends.

In all the above cases the requisite inspection chambers and lamp-holes have been formed and vent traps provided and fixed for the efficient ventilating and control of the sewers and drains.

PLANS.

45 sets were submitted to the Council during the past year, which included drawings for the new church at Abbotsbury, and also 3 detached villas, 27 pairs of semi-detached houses, and in rows or terraces there were 13 houses of a medium size and 10 of a smaller for artizans.

The plans for additions and alterations to existing premises included 11 for additional rooms, 3 for alterations, and 7 for outbuildings.

The plans also sent include 1 large bakery and stores, 1 workshop, 11 new shops, 5 stables and 5 stores.

LEWIS STEVENS, SURVEYOR.

7th February, 1905.

MR. H JUDD, Sanitary Inspector, reports as follows :—

GENTLEMEN,—

I have the honour of presenting to you my fourth Annual Report on the work carried out in my department for the year ending December 31st, 1904.

By the summary at the end it will be seen that again this year a large number of sanitary improvements have been effected, many of which were carried out in the larger houses, where antiquated sanitary fittings and defective drains have been replaced by more modern arrangements.

HOUSE-TO-HOUSE INSPECTION.

This work is still progressing with the result that by to day the drains and sanitary conveniences of several hundreds of houses have been satisfactorily renovated.

During the year drainage and other improvements have been effected in the following blocks of houses :—

THOSE FINISHED.	THOSE PARTLY FINISHED.
Buckland View	Quay Road
Salisbury Road	Quay Terrace
Oak Place	The Avenue
Waltham Terrace	Pomeroy Cottages
Mackrell's Alms Houses	Highweek Street
(Old block).	Exeter Road
	Mile End Cottages

A large number of properties in Highweek village have received attention, and all the houses in Highweek Road from Broadland Cottage to Alpha Cottage have had their drains relaid and closets flushed.

A complete record is kept of the alterations carried out, and sketches made of the drains ; these sketches are handed over to the Surveyor, who plots them on the Ordnance Sheets.

SEWERS LAID ON BUILDING SITES.

The following sewers have been laid and tested :—Keyberry Road, 9-inch pipe, 374 feet ; Abbotsbury, 6, 7 and 8-inch pipes, 202 feet ; King Street, 9-inch pipe, 110 feet ; total number of feet of piping laid, 686.

NEW HOUSES.

The drains and sanitary arrangements of 35 new houses have been supervised and tested previous to occupation.

COMMON LODGING-HOUSES.

These are periodically visited and the bye-laws with regard to limewashing, &c., enforced.

On the night of May 11th, I visited the two common lodging-houses in the town, and found in one overcrowding, and in the other overcrowding and mixing of the sexes.

It being " Fair Night " when this occurred the Council decided not to take action on this occasion, but the lodging-house keepers were warned that no such leniency would be shewn them if the same thing happened again.

COWSHEDS AND DAIRIES.

The number of dairies on the register is 24. These are periodically

visited and the necessary limewashing enforced when not attended to. When visiting these places special attention is given to the proper storage of milk, and in one or two cases steps had to be taken to obtain this.

One cowshed has been redrained and two paved with brick.

SLAUGHTER HOUSES.

The necessary limewashing and cleansing is always well attended to, and I have no complaint to make of the way in which these places are kept.

This year the Council's workmen took in hand the cleansing of the public slaughter house, since when there has been a marked difference in the general cleanliness of the place.

UNSOUND FOOD.

On the afternoon of July 14th I found in the public slaughter-house the carcase of a tuberculous bullock, together with the lungs, which were much affected by the disease.

I sent for the Medical Officer of Health, who condemned the carcase and all its organs as being unfit for human food, and after obtaining a Magistrate's Order for its destruction, I had the whole buried at the Marsh ash tips. No proceedings were instituted for the following reasons :

1st. When alive the animal looked quite healthy, and was therefore bought in good faith.

2nd. The slaughterer (he was not the owner of the bullock) was ignorant of what was wrong.

3rd. There was no attempt at concealment.

4th. When the owner saw the carcase he readily admitted it was bad, and consented to its being destroyed.

On July 16th I seized and destroyed 30lbs. of unsound pork ; and on Friday, July 29th, a forequarter of decomposing mutton which was found hanging in one of the meat stalls of the market. Evidently this was forgotten by one of the butchers on the previous Wednesday.

No proceedings could be taken in the first case owing to a legal technicality, and in the second it is obvious there was no occasion for any action other than that mentioned.

INFECTIOUS DISEASES.

22 rooms were disinfected by request of the Medical Officer of Health ; 14 of these following deaths from phthisis ; 5 in consequence of scarlet fever ; one after a case of diphtheria ; and a room and the operating theatre at the Hospital.

FACTORIES & WORKSHOPS ACT, 1901.

The number of workshops on the register is 87, being an increase of 8 since last year's report. These are classified as under :—

Bakehouses, 9 ; Basket Makers, 2 ; Brush Makers, 1 ; Cycle Shops, 3 ; Coach Builders, 4 ; Cabinet Makers, 1 ; Dressmakers, 21 ; Dyers, 1 ; Laundries, 6 ; Marble Masons, 3 ; Painters and Decorators, 1 ; Plumbers and Carpenters, 14 ; Refreshment Rooms, 1 ; Saddlers and Harness Makers, 3 ; Smiths, 4 ; Tailors, 9 ; Tinsmiths, 4.

Visits have been made to each of these places, and it was found necessary to serve notices with regard to the following matters :—Repairing defective drains, 6 ; paving yard surfaces, 3 ; cleaning choked drains, 2 ; limewashing, 4 ; improving and flushing closets, 5 ; closet accommodation provided, 2. All the notices are complied with.

HOUSES DEMOLISHED & CONDEMNED.

Those demolished :—No. 5 Court, Wolborough Street, 6 ; No. 7

Court, East Street, 12 ; Wolborough Street, 2 ; East Street, 4 ; total number demolished, 24.

Closing orders were obtained with respect to two cottages—one in No. 10 Court, East Street, and one in No. 11 Court, East Street.

CLERICAL WORK.

Intimation notices served, 162 ; complied with, 135 ; legal notices served, 7 ; complied with, 5 ; letters written, 198.

SUMMARY OF SANITARY IMPROVEMENTS.

Drains relaid, 113 ; drains repaired, 73 ; defective stench traps replaced with gullies, 38 ; disused drains destroyed, 46 ; rain water down-pipes cut off from drains, 23 ; defective shutting repaired, 12 ; drain inspection chambers built, 83 ; those repaired, 6 ; soil and vent shafts fixed, 55 ; those repaired, 7 ; internal soil pipes removed and fixed outside, 2 ; drains cleared, 6 ; urinals built and flushed, 1 ; cesspools cleaned, 1 ; privies abolished, 4 ; pail closets provided, 3 ; extra closet accommodation provided, 8 ; closets reconstructed, 9 ; those repaired, 22 ; wash-down pedestals fixed, 18 ; closet pans and traps renewed, 72 ; closets flushed, 68 ; closet flush cisterns renewed or repaired, 18 ; old container closets abolished, 2 ; courtyards paved, 41 ; those repaired, 22 ; houses repaired, 19 ; those cleansed, 5 ; scullery sink troughs provided, 43 ; staircases lighted and ventilated, 35 ; floors ventilated, 3 ; piggeries drained, 2 ; pig nuisance abated, 1 ; fowl accumulations removed, 16 ; wells closed, 2 ; wells cleaned, 2 ; spring water piped to premises, 1 ; town water laid on to premises, 10 ; drinking taps connected direct to mains, 59.

I have the honour to be, Gentlemen,

Your obedient Servant,

H. JUDD, SANITARY INSPECTOR.



III.—DAWLISH URBAN.

PHYSICAL CHARACTERS. The town is situated at the bottom and on the slopes of a picturesque ravine, running from Haldon in an easterly direction to the sea, and is in a remarkable degree isolated by the surrounding hills. The central portion of the town is occupied by extensive gardens, through which runs the stream known as Dawlish Water. The hills vary from cliffs overhanging the sea with a height of 150—300 feet, up to 800 feet on the summit of Haldon. The district, which has a total area of 1,500 acres, includes the residential village of Holcombe, pleasantly situated on the cliffs about $1\frac{1}{2}$ miles to the south. The geological formation is red breccia or sandstone.

The population at the census of 1901 was 4,003, which for statistical purposes I have left unchanged ; there were at that time 892 inhabited houses, with an average number of persons per house of 4·5.

VITAL STATISTICS. The number of deaths registered in 1904 was 64, of whom 31 were in males and 33 in females, giving an annual rate per 1,000 of 16·0 ; this is 1·2 below the figures for 1903 and 1902, and 1·7 below the average for the preceding 10 years. There were 11 fatalities in visitors ; if these are deducted the rate is reduced to 13·2. From the Union House at Newton only one death was recorded in a person belonging to Dawlish ; if this is also excluded there is a further reduction to 13·0. The deaths in the four quarters of the year numbered 22, 17, 11, and 14, giving annual rates per 1,000 of 22·0, 17·0, 11·0, and 14·0 respectively. Thus the first quarter shewed considerably the highest mortality, while February and April were the most fatal months ; only 1 death was registered in October.

CHIEF CAUSES OF FATALITY. From the 7 ordinary zymotic diseases, 2 deaths—both due to whooping cough ; influenza, 1 ; constitutional diseases, 15, of which 6 were due to cancer and 7 to phthisis ; diseases of the nervous system, 4 ; of the respiratory system, 7 ; of the circulatory system, 14 ; of the urinary system, 2 ; of the digestive system, 8 ; of the lymphatic system, 1 ; of parturition, 1 ; infantile debility, 1 ; alcoholism, 1 ; old age, 3 ; and violence, 4, of which 2 were due to accident, 1 to suicide, and 1 to sunstroke. Deaths from phthisis, of which 2 were in visitors, while

slightly above the average, shew some reduction on last years figures ; cancer occupies a slightly less favourable position. Heart diseases are responsible for a considerable increase, though they do not reach the high figure of 1902 ; the respiratory group on the other hand is well below the normal.

COMPARATIVE TABLE.

DEATHS FROM	1904	Average of years 1894-1903	1903	1902	1901	1900	1899
Smallpox ... ..	...	...	...	...	...	...	...
Measles ... ..	...	...	...	...	...	8	...
Scarlatina ... ..	...	...	1	1	...	...	...
Whooping Cough	2	1.3	...	...	...	...	8
Diphtheria ... ..	...	...	...	...	...	...	...
Continued Fevers (Typhoid, &c.) ... ..	...	1	...	...	...	1	...
Diarrhoea ... ..	...	1.1	...	2	5	...	1
Seven Chief Zymotics	2	3.6	1	3	5	9	9
Phthisis	7	6	10	6	8	7	3
Other Tubercular Diseases ... ..	...	2.5	3	4	2	3	2
Bronchitis, Pneumonia, Pleurisy	7	9.5	6	7	12	13	12
Heart Diseases	14	9	9	17	5	9	8
Cancer	6	4.5	7	...	6	4	5
Violence	4	2.5	3	3	2	...	3
All Other Diseases	24	35	30	29	19	34	47
Total deaths	64	72	69	69	59	79	89
Estimated Population	4000	4058	4000	4000	4003	4020	4040
General Death Rate	16.0	17.7	17.2	17.2	14.7	19.7	22.0
Ditto excluding visitors	13.2	15.6	14.7	15.2	13.7	18.1	18.5
Zymotic Death Rate	50	89	25	75	1.2	2.2	2.2
Total Births	76	80	62	81	59	77	84
Birth Rate	19.0	19.6	15.5	20.2	14.7	19.1	20.8
Deaths under 1 year	8	12	5	13	12	11	18
Deaths between 1 and 5 years	1	3.5	2	4	1	11	8
Deaths over 65 years	31	30	31	26	18	21	42
Deaths under 1 year to 1000 births	105	149	81	160	203	143	214
Deaths in Union House belonging to District	1	2	6	3	1	2	...

AGE INCIDENCE. Under the age of 1 year there were 8 deaths ; between 1 and 5 years, 1 ; between 15 and 25 years, 3 ; between 25 and 65 years, 21 ; and over the latter age, 31. Thus the percentage of deaths under 1 year to the total was 12.5, and of those over 65 years, 48.4. In comparison with last

year, when the figures were 7·2 and 44·9 respectively, the first item is not so favourable, whereas an improvement is manifested in the other.

THE INFANTILE MORTALITY, or deaths under 1 year to 1,000 births, was 105; this is not so good as that of 1903, but is a long way below the 10 years average. The causes of these deaths were: pneumonia, 1; constitutional diseases, 1; digestive disorders, 3; debility, 1; and whooping cough, 2. As in 1903, there were no fatalities from infantile diarrhœa. The births of 36 boys and 40 girls give an annual rate of 19·0 per 1000, which, though an improvement on that of 1903, is still a fraction below the decennial average. The births during the four quarters of the year were 17, 20, 20 and 19, giving rates of 17·0, 20·0, 20·0, and 19·0 per 1000 per annum respectively. The natural increase or excess of births over deaths, reckoning the mortality in the Union House, was 12.

The above figures may, like those of the preceding year, be regarded as constituting a very good record. The general death rate has receded, and that with visitors excluded, which represents the real mortality, is the lowest since 1897, when it was 13·0.

The zymotic rate is slightly higher than that of 1903, but this was wholly due to the whooping cough epidemic, and presents no sanitary significance. The infantile mortality has increased somewhat, but is still very fair, while the birth rate shews signs of recovery.

ZYMOTIC DISEASE. From the 7 ordinary zymotic diseases there were 2 deaths—both due to whooping cough, and in children under 1 year of age. This results in an annual rate of ·50 per 1000, as compared with ·25 in 1903, and an average decennial rate of ·89.

The notifications were 7 in number, of which 2 were diphtheria, 2 typhoid fever, and 3 phthisis.

WHOOPING COUGH. This was prevalent among the children—especially affecting the infant school in the late spring and early summer months, causing 2 fatalities. The outbreak took place at a favourable season of the year, but is always dangerous to infants in the first few months of life; on the last occasion—in the spring of 1899—there were 8 deaths. During the 5 years which have since elapsed, 359 births were registered, representing a considerable accumulation of susceptible material; the mortality in 1904 was, however, lower than it has usually been in previous epidemics.

TYPHOID FEVER. Two cases were reported, both in

adults. The first was towards the end of August ; this patient was a frequent consumer of shell fish, and it was stated that on previous occasions diarrhœa was induced as a consequence. There were 5 others in the house, 3 of whom were young children ; none of these apparently ever partook of this article of diet. Curiously enough, there was a case of diphtheria in the same house—an isolated one on the Teignmouth road—in the previous year, after which reconstruction of the drainage was carried out ; the public water supply is laid on to the premises. I think there is very little doubt that this case was due to infection from polluted shell fish.

The other attack was notified towards the end of the year in a newcomer ; this evidently originated outside the district, and calls for no special remark.

DIPHTHERIA was responsible for two notifications, both being in children. In one instance there was a history of other previous sore throats among adults in the affected house ; but examination of the drainage was attended with a negative result in each case, and the causes of infection were obscure.

ISOLATION HOSPITAL. This question is still in abeyance. Plans were prepared by the Surveyor rather more than a year ago for a proposed building on a field belonging to the Council at Dawlish Water, about $1\frac{1}{2}$ miles from the town. It was intended to start the work in the spring of last year, but owing to pressure of other matters nothing further has been done.

DISINFECTION. Houses are disinfected and lime-washed where necessary. The Council have bought a Lingner's apparatus for the aërial disinfection of rooms ; this has worked very well, and I consider it a great advance on the formalin lamp previously in use. There is, however, no means of dealing with infected clothing and bedding ; though in a small town like Dawlish where, as a rule, only two or three cases of serious infectious disease occur in the course of the year, it is a question whether it is not more economical to destroy these, if necessary, and compensate the owners than to set up an expensive plant for the purposes of disinfection.

PHTHISIS. Seven deaths were recorded from this disease, 2 of which, however, were in visitors ; the decennial average is 6, so that the figure for 1904 is about normal. One was between the ages of 15 and 25 ; two between 25 and 35 ; one between 35 and 45 ; one between 45 and 55 ; and two between 55 and 65. Voluntary notification of this disease has been adopted now for four years, but only 10 cases have been reported during that period ; in all probability a small propor-

tion of those that exist. The question of the provision of sanatoria, or isolation hospital for consumptives, has of late been somewhat actively discussed. This has its merits as a curative measure for the individual affected, but it is not basically a preventative one. Even when large combination areas are formed for the purpose, the expense will be considerable—and in this county out of all proportion, seeing that so many incipient cases of all classes take up their residence in the south west of England in the hope of warding off an early fatal result.

The fact of hospitals being available will be a further inducement for immigration of persons of the tubercular type ; and moreover, these institutions do not tend to encourage the healthy tourist in the immediate neighbourhood. This disease from all available statistics appears to be steadily diminishing, and the best preventative measures are those which ensure the provision of a proper airspace for dwelling-houses, and the general sanitary improvement of their surroundings. In this lies the importance of rigidly enforcing the bye-laws in respect of new houses, and the destruction of insanitary areas of slum tenements—still much too common in our large towns. In this connection proper feeding is closely associated with proper housing ; this is outside the control of sanitary authorities, but it has had without doubt a marked influence, and with the advance in wages and general prosperity of the working classes, this type of disease will tend eventually to disappear.

SANITARY CONDITIONS & PROCEDURE.

WATER SUPPLY is derived from two springs on Haldon, the flow from which, after a short course—in one case of $\frac{3}{4}$ of a mile, and in the other of about $\frac{1}{4}$ of a mile—is collected in a small impounding reservoir with a sand filter, and is thence piped to the town, a distance of about 5 miles. The gathering ground is uncultivated and of moorland type, and is entirely free from houses or any source of animal pollution. There is a reservoir containing 500,000 gallons on the Burrows, a hill just outside the town. The main is continued to Holcombe, which is thus supplied from the same source, though some of the houses derive their water from a spring on the hill above ; the intake reservoir and the stream immediately above are cleaned from time to time by the Surveyor. In comparison with the difficulties which have been encountered of late years in many towns in their efforts to comply with modern demands upon a water supply, Dawlish is fortunate in having such a favourable source, so to speak, at its doors.

SEWERAGE. Water closets are general ; the sewers are all brought to one main outfall, which is taken out to sea at a distance of about threequarters of a mile north of the station ; the outlet is below low water level. This outfall sewer has worked well during the year under review. Holcombe has a sewer which also discharges into the sea.

SCAVENGING. House refuse is removed daily in the central portion of the town ; twice and thrice weekly in different parts of the outskirts ; and weekly at Holcombe.

No great work of sanitary importance has been carried out during the past year, but progress continues to be made in the reconstruction of private drainage. Considerable discussion has arisen in one or two instances on the vexed question of drain v. sewer ; the law on this point seems to be extremely vague, and decisions given in the Courts are continually being reversed. The time has come for a consolidation and revision of the whole of the Public Health Acts, in which points such as these are clearly defined. Certificates of sanitation continue to be in demand, and 21 were granted in 1904 ; their advantage, especially with regard to the lodging houses, is evidently firmly established in Dawlish.

No cases of overcrowding came under notice ; I had to report two cottages at Holcombe as being unfit for habitation in the early part of the year ; this was largely owing to the fact that they are submerged at the back, and damp on this account. Subsequently some improvement was effected ; but difficulty arose from the premises at the rear being under different ownership.

During the last year 11 new dwellings—of the cottage type—were completed. There is still room for more houses of this class ; just at present owing to the doubling of the railway line and enlargement of the tunnels there is no lack of employment ; indeed much outside labor has been brought into the town, for which accommodation has to be found. It is true this is only temporary, but nevertheless the considerable sum distributed in the form of wages, most of which is spent locally, tends to have a general stimulating effect.

That the town is prosperous is shown by the fact that only about 30 houses are empty—mostly of the larger type. A proposal has recently been before the Council to lay out a new road extending from East Cliff along the hill which bounds the northern side of the town—plans have been prepared by the Surveyor and a Local Government Board enquiry will shortly be held. Houses built along this route will enjoy a healthy, elevated site, with a southern aspect and a fine sea view ; being at the same time within a few minutes walk of the town, beach, and station. Just now the demand is for modern

houses of the villa type, with a rental of from £25 to £50 a year ; if the scheme is successful, and I see no reason to doubt this, it will have the effect of creating a new suburb. With a little judicious planting—for foliage is always attractive for its appearance as well as the shade afforded—and the provision of a few seats, or even a shelter or two, at suitable points, this should form a valuable addition to the inducements which Dawlish already holds out for residents and holiday visitors.

I have inspected the following workshops during the year ; the sanitation of all of them including lighting, ventilation, and closet accommodation, is in fairly good order. Of the bake-houses, only one comes within the legal definition of “under-ground,” and the construction of this being satisfactory, a license has been granted by the Council in accordance with the Act.

Dressmakers.....	11	Wheelwrights	1
Bakers	8	Plumbers.....	1
Laundries	10	Blacksmiths	1
Builders... ..	4	Tailors	2
Printers	1	Upholsterers	2

Mr. R. E. Clarke, Surveyor and Sanitary Inspector, reports as follows :—

Houses inspected, 110 ; dairies and cowsheds inspected, 8 ; slaughter-houses inspected, 6 ; intimation notices served, 18 ; statutory, 7 ; houses disinfected, 16 ; house drains, new connections to main sewer, 24 ; houses re-drained with new drains in lieu of defective, 38 ; house drains, disconnected by interceptor, 38 ; total number of smoke tests, 40 ; removal of offensive accumulations due to notices served, 9 ; total number of water tests, 79 ; total number of feet of drain water tested, 1,572 ; total number of visits, 960 ; total number of sanitary certificates granted under the Public Health Acts, 21.

R. E. CLARKE, C.E.,

Surveyor and Sanitary Inspector.



ANALYSES OF WATERS—1904.

No.	Source.	Date of collection	Physical characters	Free Ammonia		Albuminoid Ammonia	Nitrogen from Acids	Chlorine	Total Solids	Oxygen Absorbed	Remarks
				Parts per 1,000,000	grains per gallon	Alb. Amm.	Nit. Acids	Chlorine	Total Solids		
1	Hemnock, shute, in Village	Jan 11	good	·01	·03	·7	1·5	14·0	small	An excellent spring water	
2	Moreton, public supply	Jan 27	yellow colour	·035	·18	·55	1·3	8·0	large	Taken after a heavy storm, and shows a good deal of vegetable matter	
3	Dawlish W., well at Aller Cottages	Feb 5	good	·03	·03	...	4·0	14·0	small	A very fair well water	
4	Hsington, shute on Haytor Down	Feb 19	good	·005	·015	·20	1·1	7·0	moderate	The Down was covered with snow, an upland surface water	
5	North Bovey, well on Green	Apl 13	good	·005	·10	...	4·6	35·0	moderate	Shows signs of pollution: is in granite formation	
6	Dawlish, public supply	Apl 15	good	·008	·05	·4	1·3	5·9	small	A pure and very soft water	
7	Chudleigh, public supply	May 6	good	nil	·02	·4	2·1	28·0	small	An excellent water	
8	Sigford, spring	May 13	good	nil	·02	...	1·3	14·0	small	Another first-class water	
9	Highweek, wells at Mile End (I)	May 13	good	·005	·06	2·6	3·8	44·8	moderate	These are all fair well waters, but rather hard	
10	ditto (II)	May 13	good	·01	·015	...	3·5	42·0	moderate		
11	ditto (III)	May 20	good	·015	·08	...	3·2	42·0	considerable		
12	Bishopsteignton, public supply	July 1	good	nil	·04	...	2·1	23·8	small	A spring water of very good quality	
13	Dawlish W., well at Easdon Farm	Aug 2	good	·12	·14	...	9·3	58·8	moderate	Unfit for drinking purposes: a shallow well adjoining a farm yard	
14	Bovey, well at Lower Yeo	Aug 9	good	·03	·12	...	2·5	21·0	considerable	There is considerable vegetable matter in this water	
15	Lustleigh, public supply	Sept 9	a few particles of suspended matter	nil	·055	·4	1·5	9·8	moderate	A very good upland water from the granite	
16	Wolborough, well at 83, East Street	Sep' 26	good	nil	·06	...	6·3	56·0	small	Shows signs of pollution: not now used for drinking	
17	Teigngrace, well at School	Oct 24	some clay in suspension	·015	·16	...	3·8	37·8	considerable	A very indifferent water	
18	Wolborough, supply of Spring side cottages	Nov 5	good	·02	·06	...	2·5	37·8	small	A very good spring water from the hill above the town	
19	Broadhempston, well near Church	Dec 2	good	·005	·07	2·0	2·8	49·0	moderate	This well has much improved since it has been drawn upon	
20	Dawlish W., well at Easdon Cottages	Dec 3	good	·01	·08	...	6·3	42·0	small	Is of better quality than No. 13, but is hardly fit for a supply	
21	Bickington, Feoffee well	Dec 23	good	·0 05	·09	...	2·8	49·0	moderate	This well is rather near a graveyard	

